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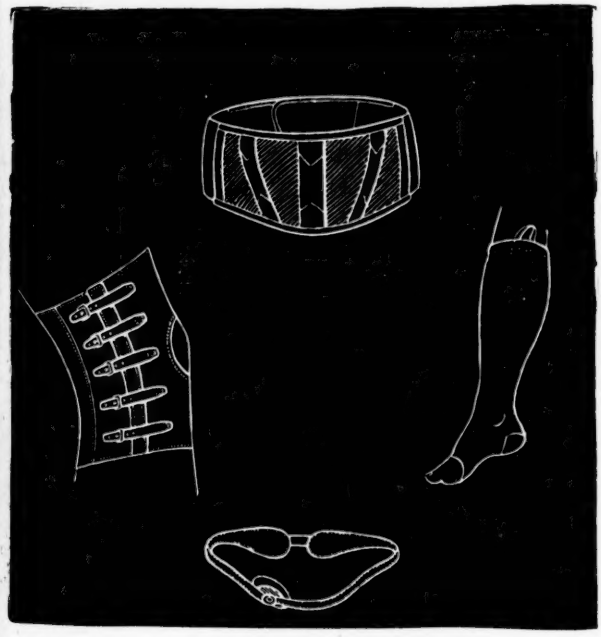

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The next Annual Meeting of the Massachusetts Medical Society will be held in Boston, at the Hotel Statler, June 3, 4, and 5, 1935.

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MISTAKEN DIAGNOSES OF CANCER*

Case Studies

BY DUDLEY MERRILL, M.D.†

THERE is no single sign or symptom or group of signs or symptoms which can be called pathognomonic of cancer. Carcinoma can affect any part of the body, its signs are legion and its symptomatology protean. Whenever possible a diagnosis of cancer should not be based upon clinical data alone. The only way in which a proved diagnosis can be made during life is through biopsy. If the tissue removed from the suspected lesion is properly prepared and is examined by a competent pathologist who pronounces it to be cancerous, then one may be certain that the patient has malignant disease.

In a large cancer clinic, like the Massachusetts State Cancer Hospital at Pondville, perhaps one of the most interesting problems from a purely medical point of view is the weeding out of the non-cancerous cases. Coming to such a clinic is a fairly large group of patients in which a diagnosis of non-malignant disease can be established by a careful routine history and physical examination. There is a second smaller group in which the diagnosis of cancer can be ruled out by the addition of a few relatively simple laboratory investigations. These procedures include careful morphological study of the blood, a Wassermann test, urine examination and sometimes x-ray examination of the chest and gastro-intestinal or genito-urinary tracts. There is a third group, still smaller than either of these first two, in which the final proof of the non-malignant nature of the disease is most difficult, even after thorough study and with the help of all the usual diagnostic procedures. The correct diagnosis of these cases can give one a sense of accomplishment out of all proportion to the effort expended and it is a consideration of cases of this sort which forms the basis of this report.

In every instance the preliminary clinical diagnosis was cancer, justified by the available clinical data at the time of admission to the hospital; yet in each instance the diagnosis was wrong. These five cases are selected not because of their rarity but because each one illustrates a striking lesson.

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The importance of making a correct diagnosis lies in the fact that rational therapy cannot be instituted if one is ignorant of the underlying disease process. Secondly, pathological processes which have progressed to the point of simulating some form of malignant disease rarely tend to get better spontaneously and, in the absence of intelligent therapy, carry an extremely grave prognosis.

CASE REPORTS

The first case is one of a fifty-four year old male native of Cape Cod referred to the hospital with a diagnosis of carcinoma of the liver. He had been perfectly well until six weeks before entry when he developed severe pain low down in the right side of his chest which was intensified by respiration but was not associated with cough or fever. His doctor diagnosed "pleurisy" and strapped his chest but the pain was unrelieved. The patient went to a hospital where he was told he had "lung trouble," apparently because fluid was withdrawn from the pleural cavity, but the patient did not know the nature of the "lung trouble".

After three weeks without improvement the patient went to another hospital against advice. There he was told that his "lung trouble" had cleared up but that he had "trouble with his liver". About this time he noticed a swelling in the region of the right lower ribs in the anterior axillary line which was where he also had his pain. The swelling increased steadily. The patient had lost twenty-four pounds of weight in the six weeks of his illness but had no symptoms whatever except loss of appetite and pain in his chest. The patient knew of no fever.

Physical examination on admission to the Pondville Hospital showed a healthy looking man except for the signs of considerable loss of weight. The right side of the chest was more prominent than the left and it moved less on respiration. The prominence was most marked in the region of the costal margin where there was definite bulging of the soft parts. The heart was displaced to the left and there were signs of hydrothorax on the right. The abdomen was prominent in its upper portion due to a large mass which extended across the abdomen and from the costal margin to 3 cm. below the umbilicus. In the right anterior axillary line, where the prominence was most marked, there was questionable fluctuation and over this region a loud friction rub was heard. The mass was thought to be liver. X-ray examination of the chest showed a hydropneumothorax on the right with collapse of the right lung. A study of the gastro-intestinal and genito-urinary tracts showed no intrinsic pathology but suggested that the large mass was an enlarged liver. The patient was thought to have carcinoma of the liver, either primary or secondary, with direct extension through the diaphragm to the right lung.

In the absence of definite proof of malignancy, however, an exploratory laparotomy was undertaken. When the abdomen was opened a large cystic mass was found within the liver substance which, on incision, yielded 2.5 liters of sanguinopurulent material. The cavity was found to extend from the third right rib anteriorly downward nearly into the pelvis. A specimen of tissue from the abscess wall was examined by a pathologist who made a diagnosis of "amoebic abscess of the liver".

Postoperatively the patient was treated with emetine. His convalescence was extremely rapid. Four months later he had regained his normal weight and had no symptoms whatsoever. The value of exploratory laparotomy in this case is obvious.

The second case was that of a thirty-seven year old woman referred with a diagnosis of carcinoma of the breast with metastases. Four weeks before admission she first noticed pain and tenderness in her left breast and a week later she noticed "pus" coming from the nipple. A few days later the discharge became bloody.

Examination of the breast on admission showed a fissure in the left nipple with indurated edges. Immediately underlying the fissure and attached to the overlying skin was a hard cherry-sized mass. In the left axilla were three or four hard rubbery nontender lymph nodes approximately one cm. in diameter. There were no supraclavicular nodes palpable, nor were there any in the right axilla.

Different physicians agreed that she had a very rapidly growing carcinoma which had metastasized to the regional nodes and immediate operation was advised. A radical mastectomy was done. Shortly thereafter the blood Wassermann and Kahn reactions were reported positive. Microscopic examination of the breast tissue by the pathologist showed only "chronic inflammation, no evidence of malignancy". The patient had a stormy convalescence but eventually recovered completely. The final diagnosis was syphilis of the breast.

If operation had been delayed until after the serological tests had been reported, syphilis of the breast should have been considered in the differential diagnosis. If immediate operation had still been considered imperative, because of the necessary loss of time involved in a trial of antiluetic therapy, a study of a frozen section could have been made at the time of operation and thus a radical mastectomy avoided.

The third case was that of a seventy-four year old woman who was sent to the hospital for terminal care with a diagnosis of inoperable carcinoma of the colon. Eight months previously the patient had first begun to complain of poorly localized upper abdominal discomfort made worse by eating. Her discomfort gradually increased in severity so that she limited her diet more and more until she was taking only fluids. Since the onset of her trouble she had become progressively more constipated until this symptom dominated the picture. She required daily enemata, as cathartics increased her discomfort. She had lost 100 pounds of weight since her symptoms appeared. At another hospital x-ray examination of the stomach showed nothing abnormal. A barium enema was interpreted as showing an inconstant filling defect in the descending colon. Thus, a diagnosis of inoperable carcinoma of the colon had been made. The patient had been informed of this diagnosis and was merely waiting for the end.

Physical examination when she arrived at the Pondville Hospital showed a profoundly emaciated old woman who appeared to be in the last stages of some chronic disease. The heart and lungs were normal. The abdomen was soft and presented no masses, spasm or tenderness. The liver was not palpable. X-ray examinations of the upper and lower gastro-intestinal tract were reported negative. The patient's symptoms, however, pointed so strongly toward some lesion in the gastro-intestinal tract that the x-ray studies were repeated. This time after prolonged observation under the fluoroscope a small filling defect was finally demonstrated high up on the lesser curvature of the stomach which was considered characteristic of gastric ulcer, but no defect could be detected in the descending colon. The patient was told that she had an ulcer of the stomach and that with proper rest and dietary treatment she would eventually become well. She was put on a Sippy régime and made an extremely rapid recovery. A follow-up visit four years later showed that she had regained all of her former weight and had been symptom-free for two years.

The final establishment of the correct diagnosis unquestionably saved this patient's life.

The fourth case was that of a sixty year old Italian woman who was admitted with a diagnosis of carcinoma of the stomach. The history was of doubtful value both because the patient could not speak English and because of complete absence of her teeth her speech was incomprehensible, even to other Italians. The impression gathered, however, was that during the past eight months she had suffered from nausea and vomiting. The vomitus never contained bright red blood, nor food eaten the day before. Her diet had become progressively restricted until she took practically nothing but fluids. She had lost twenty pounds of weight and had become extremely weak.

Physical examination on admission showed a sallow somewhat emaciated weak old woman. The only outstanding finding was slight spasm and tenderness in the left hypochondrium where there was a definite sense of resistance, but no mass could be felt.

She had a moderate degree of hypochromic anemia. Tests for occult blood in the stools were negative. It was felt, nevertheless, that her history and physical examination were consistent with the diagnosis of carcinoma of the stomach. A series of x-ray films of the stomach were interpreted as showing no pathology. Fluoroscopic examination, on the contrary, revealed a large filling defect extending from the middle of the lesser curvature well down toward the pylorus. A few days later this defect could no longer be demonstrated, and x-ray examination by means of a barium enema was negative.

The patient was given a bland diet in five small meals a day while 60 grains of iron ammonium citrate were given daily for the anemia. In three weeks she had gained eleven pounds of weight, her hemoglobin had risen almost to normal and she had no complaints. She was about to be discharged when she suddenly had a return of her former symptoms: loss of appetite and a sense of fullness after meals.

At this time examination of the abdomen revealed a tumor the size of an orange in the epigastrium. The patient had been repeatedly examined prior to this and no mass had ever been detected. The mass moved only slightly on respiration and was not particularly tender. It felt like a muscular hollow viscus undergoing spasmodic contraction, as its consistence varied from minute to minute. Her symptoms suggested partial intestinal obstruction, therefore a barium enema was given at once but the x-ray examination revealed nothing abnormal. The next day the stomach was studied by means of the x-rays, but the mass had disappeared and fluoroscopy added

nothing. A few days later the mass reappeared and the patient was hastily given more barium by mouth. This time fluoroscopy revealed an inconstant large filling defect on the lesser curvature. With this added evidence of gastric abnormality, an exploratory operation was done.

A large tumor was found filling the first part of the duodenum. While it was being palpated it slipped back into the stomach. The stomach was opened and a single large pedunculated growth was found which was completely excised. Microscopic examination revealed it to be a benign mucous polyp. The patient's recovery was uneventful.

Persistent efforts directed toward the establishment of a diagnosis here resulted in saving the patient from chronic invalidism and possibly death from a condition amenable to therapy.

The fifth case was that of a fifty-five year old male cement-worker who was admitted with a diagnosis of carcinoma of the esophagus. Two and one-half months previously he had first developed difficulty in swallowing solid foods. This progressed rapidly until he even had difficulty swallowing fluids because of regurgitation through his nose. Coincident with his increasing dysphagia he had lost twenty pounds of weight and his legs and arms became remarkably weak. He could not even sit up in bed or feed himself. At this time he was admitted to another hospital because of severe peripheral neuritis and paralysis of the tenth nerve. While there he was given a swallow of barium and a large filling defect in the esophagus at the level of the larynx was demonstrated. The patient was transferred to the Pondville Hospital with the diagnosis of carcinoma of the esophagus. Additional history was then obtained that the patient had been accustomed to taking from a pint to a quart of spirits daily for the past forty years. It also was discovered that he had worked for eighteen years carrying cement bags, an extremely dusty occupation, and had had a "cigarette cough" for years.

On physical examination the significant findings were dry, scaling, erythematous lesions of the skin of the backs of the hands, extensor surfaces of the forearms and shins, marked atrophy of the large muscles of the arms and legs. There was marked hyperesthesia of the hands and feet, tenderness on pressure of the large muscles of the legs, absent knee jerks and ankle jerks and diminished biceps and triceps reflexes. There was slight dullness and many crepitant râles all over the lung areas.

At this time the patient was beginning to have less difficulty in swallowing. Fluoroscopy of the esophagus showed a large filling defect behind the larynx but no obstruction. Roentgenogram of the chest showed a diffuse patchy infiltration of both lung fields.

The occurrence of pellagra in chronic alcoholism is well recognized. Recently Minot, Strauss and Cobb[1] have clearly brought out the rôle of dietary deficiency and particularly of vitamin B deficiency in the production of polyneuritis in chronic alcoholism. Therefore, because of this patient's history of chronic alcoholism, extensive polyneuritis and skin lesions suggestive of pellagra, he was given a diet rich in vitamin B, and intramuscular liver extract, which is rich in vitamin B complex. No specific measures were directed against this patient's supposed carcinoma of the esophagus.

The patient began to improve with great rapidity. One month after entry he had lost most of his hyperesthesias, was able to walk around the ward and had no difficulty in swallowing solid foods. The x-ray examination then showed clearing of the lung fields. At this time an esophagoscopy was unsuccessful due to poor coöperation. Under the fluoroscope, however, no filling defect in the esophagus could now be demonstrated. After another two weeks of steady improvement, esophagoscopy was done under avertin anesthesia and no pathology whatever was found.

X-ray films of the chest still showed a diffuse patchy infiltration of both lung fields. The sputum had been repeatedly reported negative for tubercle bacilli and the former supposed carcinoma had disappeared, so the x-ray films were reviewed again with the added information at hand that the patient had worked in a dusty occupation for eighteen years. The final opinion of the x-ray department was that the findings were consistent with pneumoconiosis.

The final diagnosis was "alcoholic" polyneuritis, pellagra and pneumoconiosis. The esophageal dilation could be explained as dependent upon a neuritis of the tenth nerve.

This case again emphasizes the all important point that a diagnosis of cancer is never incontestable before a biopsy has been taken from the suspicious lesion.

In conclusion, the importance of arriving at a positive diagnosis is again stressed in cases where malignant disease is suspected. By positive diagnosis one thing only is meant and that is its establishment by microscopic examination of tissue from the suspected lesion by a competent pathologist.

All five cases reported here presented clinical features which in the majority of cases spell cancer. In every case not only was the diagnosis of cancer wrong, but the underlying pathology was such that once the proper therapeutic measures were instituted either absolute or practically complete cure was actually effected.

REFERENCE

1 Minot, G. R., Strauss, M., and Cobb, S.: "Alcoholic" polyneuritis; dietary deficiency as a factor in its production. New Eng. J. Med. 208:1244, 1933.

TREATMENT OF VARICOSE ULCER BY GENTIAN VIOLET*

BY CHARLES M. KRINSKY, M.D.†

INTRODUCTION

THE stubborn chronicity of varicose ulcer and the economic losses suffered by patients so afflicted are vastly out of proportion to the severity of the surgical condition itself[1]. Many patients and doctors have been discouraged with the lack of uniformity of results under any of the better known treatments, and this has been borne out by the multiplicity of procedures which have been advocated. The purpose of this paper is first, to offer an explanation of the chronicity on the basis of secondary infection,

*From the Medical Service of the Worcester State Hospital, Worcester, Massachusetts.

†Krinsky, Charles M. — Intern, Research Service, Worcester State Hospital. For record and address of author see "This Week's Issue," page 836.

and secondly, to recommend the topical application of five per cent aqueous gentian violet solution in the local treatment of varicose ulcer. Notwithstanding the fact that the number of cases in this series is small, the gratifying uniformity and consistency of the results warrant their presentation here for the consideration of those who have at their disposal a larger number of such cases.

BACTERIAL INVESTIGATION

Since many antiseptic substances have been of some value in the treatment of this condition, it was believed that the ulcers must of necessity have been infected. A study of the bacterial flora of these lesions was thus instituted, and the results are shown in table 1. When each case was accepted for treatment, a smear, which was made from the crater of the ulcer, was stained by Gram's method, and beef broth cultures were inoculated. From the direct smear and broth cultures, gram-positive staphylococci were found in pure culture. Blood agar plates which were then streaked with organisms obtained from the broth culture showed hemolysis. Gram-positive staphylococci were again seen in the stained smear, this finding holding true for all cases.

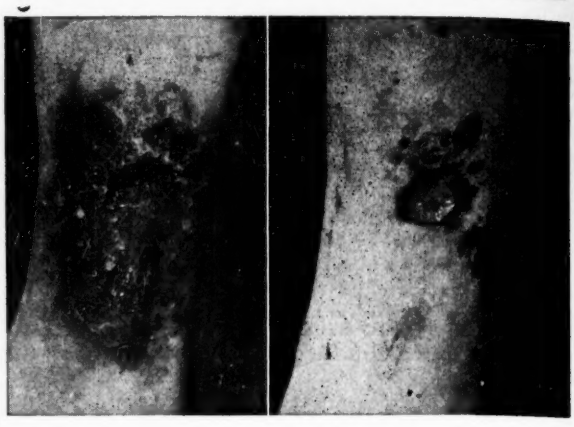
TABLE 1

Cases	Direct Smear	Beef Broth	Blood Agar Plate
		Cloudy	Hemolysis
1	Gram+ Staphylococci	Gram+ Staphylococci	Gram+ Staphylococci
2	"	"	"
3	"	"	"
4	"	"	"
5	"	"	"
6	"	"	"
7	"	"	"
8	"	"	"
Control	"	"	"

The problem which presented itself was to find an efficient drug that had a bactericidal effect upon gram-positive cocci. Gentian violet, one of the aniline dyes, was found to be such a substance, since a dilution of 1-1,000,000 prevents the growth of these organisms. The effect of the dye is due to its pronounced bactericidal action and to marked stimulation of epithelial tissue. Gentian violet has been extensively used for severe burns and septicemias, in the latter case being administered intravenously[2]. Its superiority is further borne out by the fact that Barton[3] had successfully treated an ulceration of the lower extremity through its use, when several other measures had failed.

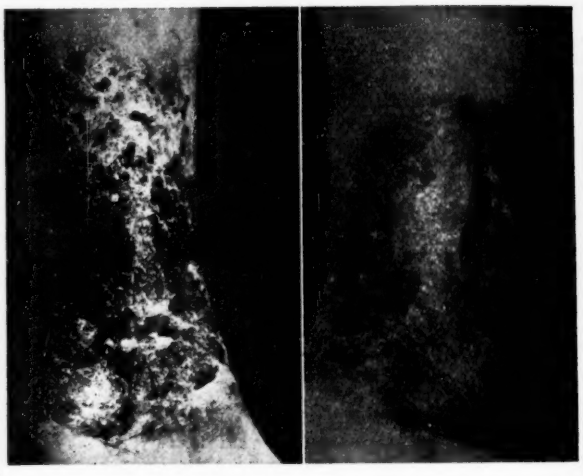
TREATMENT BY GENTIAN VIOLET

The present series is made up of nine cases of long-existing varicose ulcer, eight cases of



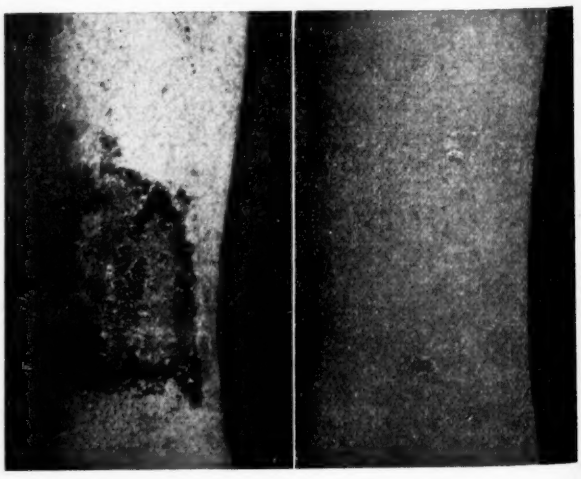
Before Treatment. After Treatment.

FIGURE 1.
Male, aged 58. Duration, 7 years.



After One Treatment. At Discharge from Hospital.

FIGURE 2.
Female, aged 52. Duration, 11 years.



After One Treatment. After Treatment.

FIGURE 3.
Male, aged 74. Duration, 2 years.

which were treated by the topical application of five per cent gentian violet solution. To one case which was regarded as a control, two per cent mercurochrome was applied. There were six female and three male patients with an age range from thirty-four to seventy-eight. In each case the Wassermann reactions were negative. Throughout the course of the treatment, the patients remained ambulatory.

of each week, but the depth of the ulcers was not considered. Photographs were taken at the beginning and end of treatment, and are shown in figures 1, 2, and 3. It is worthy of special mention that these same cases had been previously treated by many other methods, such as warm saline dressings, Unna's casts, dry sterile dressings, elevation and rest, Dakin's solution, ultraviolet light, scarlet red, and seventy per

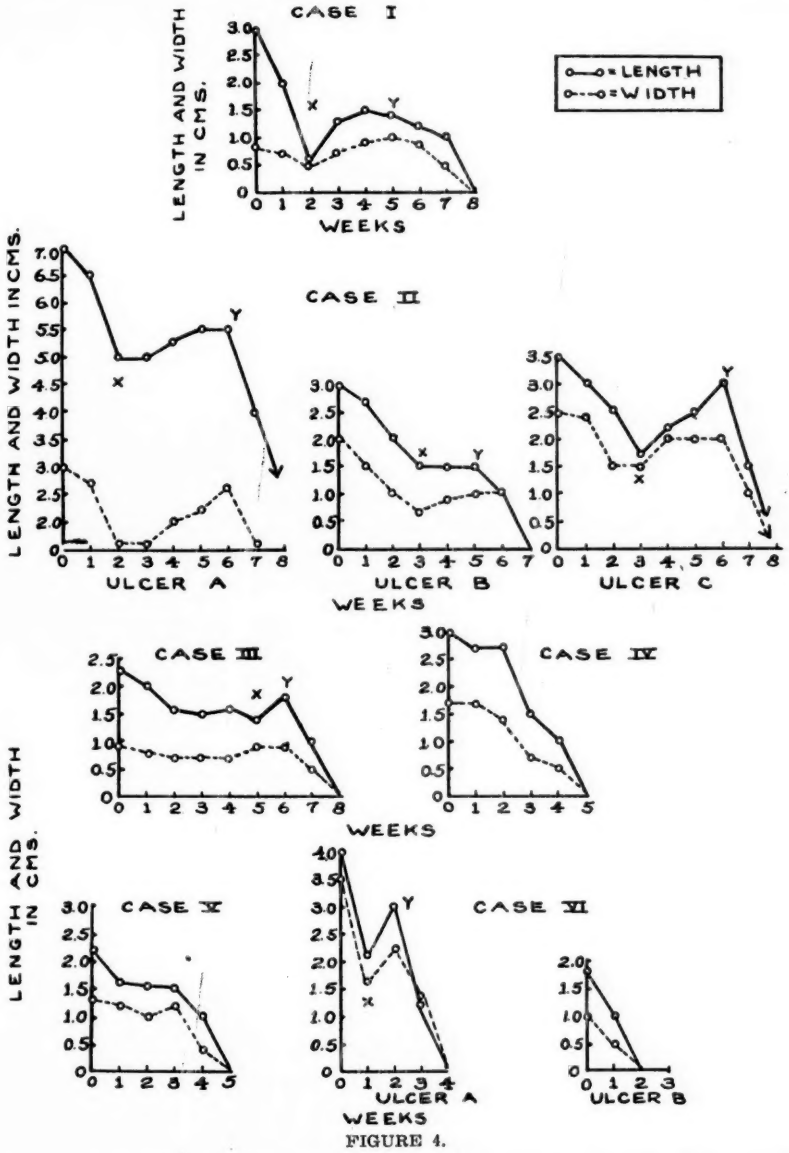


FIGURE 4.

The treatment consisted first, of washing the ulcer and adjacent areas with tincture of green soap, and drying. Five per cent aqueous gentian violet solution was then sprayed on with an atomizer or applied directly with a sterile applicator. A dry sterile dressing was employed after the gentian violet had dried. This treatment was repeated every other day until a firm crust had formed and complete healing had finally occurred. For the purpose of noting the progress in each case, the longitudinal and transverse diameters were measured at the end

cent alcohol with indefinite and indifferent results.

RESULTS OF TREATMENT BY GENTIAN VIOLET

The first significant effect noted was a marked diminution in the amount of foul, thick, grey, necrotic exudate. This occurred after a few applications, usually at the end of the first week. The second was marked shrinking of the ulcer and adjacent tissues which occurred at the end of the second week. Finally, with the third week, buds of granulation tissue were seen

sprouting from the bases of the ulcers. The borders presented newly growing epithelial tissue, which was converging toward a central focal point, and markedly diminishing the size of the ulcer. The epithelization rapidly progressed to complete healing, the average time ranging between four and seven weeks. After an observation period of nine months, only one recurrence had been noted, and this case again responded to further treatment.

A graphic representation of the progress made in six of the nine cases is shown in figure 4. It will be noted that in almost every case there is a marked decrease in the size of the ulcer by the end of the first week, indicating that during this period the bactericidal and antiseptic actions of gentian violet are at their highest. The patients tended to become uncoöperative and resistive to the treatment because of the color of gentian violet, and this is indicated by point X in the above figure. With the resumption of treatment, a therapeutic response was again achieved and is shown at point Y. The patients stated that marked relief was experienced, and that the treatment was not attended by any untoward symptoms. The one case treated with two per cent mercurochrome which was used as a control did not respond well and the ulcer was not completely healed even after a period of three months. It is probable that if the patients had been fully coöperative, the ulcers could have been healed in a much shorter time.

SUMMARY

A series of nine cases of varicose ulcer is presented, consisting of six female and three male patients, with an age range from thirty-four to seventy-eight.

Bacteriological examinations proved the flora of the ulcers to be made up of gram-positive hemolytic staphylococci.

The method of treatment consisted of applying five per cent aqueous gentian violet solution locally to the ulcer every other day until completely healed. This occurred within four to seven weeks. The patients remained ambulatory throughout the entire treatment.

Three striking facts were apparent: (1) That marked diminution of the necrotic exudate promptly occurred; (2) that the ulcer and adjoining area appeared shrunken; (3) that frank, healthy, granulation tissue made its appearance early.

Only one recurrence was noted after an observation period of nine months.

A control case treated with two per cent mercurochrome did not heal even after a period of three months.

CONCLUSION

Topical application of five per cent aqueous gentian violet solution is of definite value in the local treatment of varicose ulcer.

NOTE: The author wishes to acknowledge his appreciation of the assistance given by Miss Rose Small, who carried on the bacteriological study.

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OCCURRENCE OF COMMON DUCT STONE FOLLOWING GALL-BLADDER OPERATIONS*

BY LOUIS HERMANSON, M.D.,† AND SEEBERT GOLDOWSKY, M.D.†

DESPITE the abundant literature concerned with biliary tract surgery, insufficient attention has been paid to the relatively high incidence of common duct stones following gall-bladder operations. Their presence may be accounted for in one of several ways:

1. Failure to discover and remove stones in the common duct at the time of operation.
2. Formation of stones within the common or hepatic ducts.
3. Descent of intrahepatic stones.
4. Escape of stones from gall-bladder into common duct at the time of the first operation.

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In most instances common duct stones are found in patients who also have stones in the gall-bladder. While they may be present in cases where there are no stones in the gall-bladder, the prevailing opinion is that with the exception of calcium bilirubin stones they do not form in the common duct after cholecystectomy. Calcium bilirubin stones are not common and are said to occur as the result of infection in the common duct or its radicles[1].

The descent of intrahepatic stones may be a cause, though not a frequent one, for common duct obstruction after cholecystectomy. Beer[2] found them six times in 250 instances in which he dissected the liver.

When common duct stones appear after operation upon the gall-bladder, it is likely that they were present at the time of the first operation and were overlooked. How easily this may

happen has been emphasized by Kehr[3], Eisendrath[4], Deaver[5], Moynihan[6], Lahey[7] and others. The history may have failed to indicate the presence of common duct stones. Lahey[7] reports absence of jaundice in 37 per cent of cases in which a common duct stone was found.

When small stones are present in the gall-bladder or when the cystic duct is dilated, calculi may be expressed into the common duct at the time of cholecystectomy and remain unnoticed. In 1912 Kehr[3] pointed out that common duct exploration was advisable under these circumstances.

Furthermore, at the time of a gall-bladder operation a common duct stone may be overlooked for any one of several reasons. The gall-bladder and biliary passages may be so acutely inflamed that it is impossible to identify the finer structures, let alone palpate concretions contained within them. In other cases the common duct may be so greatly dilated and so filled with stagnant bile that a stone floating freely within it is not felt. Moreover, in some instances stones are masked by a thickened pancreas, while in others they lie hidden in the terminal portion of the common duct where the overlying duodenum interferes with palpation. Even if none of these abnormalities be present, a normal appearance of the common duct does not rule out the possibility of stone. Finally, when normal ducts are palpated, a stone which is present may not necessarily be felt. Kehr[3] reported negative palpation in 46 per cent of the cases from which he removed common duct stones.

The frequency with which common duct stones are actually overlooked during the course of gall-bladder operations is difficult to determine because of the paucity of relevant statistics. Twenty-two and six tenths per cent of 1738 patients from whom common duct stones were removed (Judd[9]) had had previous operations on the biliary tract. The greater number of these, however, were cholecystostomies. Blalock[8] found common duct stones in seven of nine patients who underwent a second operation following cholecystectomy. Brewer[10] reported five similar cases. Clute[11] in reporting seventy-four cases of common duct stones found seventeen that had had a previous biliary tract operation; cholecystostomy in seven, cholecystectomy in six, and operations not directly on the gall-bladder in four.

At the Beth Israel Hospital from 1928 to 1933 inclusive, seventy-nine common duct explorations were performed. Of 322 cholecystectomies during this period 196 were performed for gall-bladder stones. In the 196 patients fifty-one or 26 per cent were subjected to exploration of the common duct. Stones were found in fourteen, or 7.1 per cent of all patients operated on for gall-stones. One of these had had a previous cholecystostomy. Common duct stones were removed in four other patients, all of whom had had previous cholecystectomy. Thus, of fifty-five patients with cholelithiasis in whom common duct exploration was performed, stones were removed in eighteen or 32.7 per cent.

If three other patients who had previously had cholecystectomy, and in whom the diagnosis of common duct stones seemed certain, but were not operated on for various reasons are added the total number of cases of common duct obstruction due to stone reaches twenty-one. Eight of these had had previous operations on the gall-bladder, cholecystectomy in seven instances and cholecystostomy on one. Five of the eight patients were subjected to secondary operations. The interval between the first and second operations varied from two to eight years and averaged five years.

Pain, chills, fever, and jaundice were the outstanding symptoms preceding both primary and secondary operations. Pain was present in all cases. In most instances the pain was colicky in nature but not distinguishable from that associated with biliary tract diseases in general. There was no essential change between the two admissions in the nature of the pain. Jaundice was detected in four patients on the first admission, in five patients on the second, and in three cases on both. Chills and fever occurred in one patient at the time of the first admission and in three at the time of the second. Other symptoms were not significant.

Of the eight cases with a previous cholecystectomy (three of which had been operated on at this hospital) the gall-bladder was filled with numerous small stones in three, and in a fourth two large stones were present. Data on the gall-bladder are not available in the four remaining cases.

The common duct was described on five occasions. Twice it was said to be "empty." It was negative to palpation and inspection in two other cases, while in one other it could not be visualized but was negative to palpation. Notes were made of the common ducts at four of the five secondary operations. The common duct was found to be dilated in every instance. Despite the fact that palpation nearly always failed to reveal their presence, stones were found when the duct was opened and explored. Thirteen cases in the series remain. All of these had a common duct exploration at the time of the first operation. In eleven of the thirteen cases the common duct was described; in ten it was found to be dilated. Only five times were stones felt on palpation. Stones were completely removed from the ducts in all but two of the cases at the first operation. In these two, stones which were not removed when the common duct was opened and probed were revealed at post-mortem examination. In one of the latter the

duct was explored on two separate occasions, once by the transduodenal route.

The mortality for the entire group of eighteen cases in whom common duct stones were demonstrated was 22.2 per cent. There were two deaths following primary operations. In one instance death occurred as a result of pneumonia; this case on postmortem examination revealed a stone which had been left in the common duct. There was no evidence that the residual stone contributed to this death. In the second case death resulted from shock after the removal of stones from the common duct. Autopsy was not done in this case. In another instance where common duct exploration followed a previous gall-bladder operation, postmortem examination revealed the cause of death to be hemorrhage from cardioesophageal ulcerations the etiology of which could not be established. This patient was jaundiced. Because of the close association between jaundice and hemorrhage, death in this case could be largely attributed to a common duct stone which had occurred after a cholecystostomy. The fourth death previously considered, was the result of a persistent biliary fistula. This complication occurred despite two unsuccessful attempts at removal of a stone known to be lodged in the common duct.

DISCUSSION

The percentage of cases in which common duct stones are overlooked at the time of operation on the gall-bladder appears to be unnecessarily high. In 1929 Young[12] reported that of sixty-seven autopsied cases which had followed operation on the biliary tract 61.3 per cent showed stones still present in the common duct. This figure, however, was reduced to 16.4 per cent when corrected for circumstances which contraindicated or precluded any search for stones at the time of operation. In 1000 consecutive autopsies reported by Crump[13] in 1931 there were 325 cases of gall-stones. Seventy-eight or 24 per cent of these had common duct stones. These facts indicate that the common duct should be opened and explored more often than is customary. Lahey[7] in the period from 1910-1926 explored the ducts in 15.5 per cent of cases with biliary tract disease and found stones in only 8.4 per cent, while in 1932 he explored the common duct in 46 per cent and found stones in 21.2 per cent.

The foregoing facts signify that common duct stones are present much more often than they are demonstrated. To remedy this situation it would seem advisable to reëmphasize the indications for choledochotomy. In 1912 Kehr[3] gave the following indications:

1. Thickening of the head of the pancreas.
2. Thickening and enlargement of the common duct.
3. A history of jaundice, chills, or fever.
4. A cystic duct dilated by stones and separated from the common duct with difficulty with a likelihood of spillage of the stones into the common duct.
5. The presence of many small stones in the gall-bladder and cystic ducts.
6. The presence of muddy bile on section of the cystic duct suggestive of inflammation of the common duct.
7. Enlargement, induration, or cirrhosis of the liver.

To these Eisendrath[4] added one more indication: the recurrence of pain or the symptoms of cholangeitis after operations on the biliary tracts.

Lahey[7] states that common duct exploration should be added to cholecystectomy for gall-stones under the following circumstances:

1. Whenever on palpation one can or suspects that he can, feel a stone in the common duct.
2. When the common duct is dilated and when it is definitely thickened.
3. When the gall-bladder is found thickened and contracted.
4. When there is thickening of the head of the pancreas.
5. In all patients with gall-stones who are or have been jaundiced.

In our experience opening the common duct adds considerably to the hazard of operation. The mortality for this operation when added to cholecystectomy at a primary operation in our series was 5.4 per cent whereas the mortality for simple cholecystectomy for all causes was 3.5 per cent.

On the basis of the evidence presented it is therefore worth emphasizing that stones in the common duct may be overlooked by an experienced surgeon even when there is ample evidence for their presence, and even when the common duct is opened and explored. If choledochotomy will be based on the indications noted above, the discovery of more common duct stones will be made and a reduction in the number of secondary operations accomplished.

CONCLUSIONS

1. The incidence of common duct stone following gall-bladder operation is considered.
2. Indications for exploration of the common duct at the time of cholecystectomy are discussed.

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DISINFECTION IN OSTEOMYELITIS OF THE PHALANX (FELON)

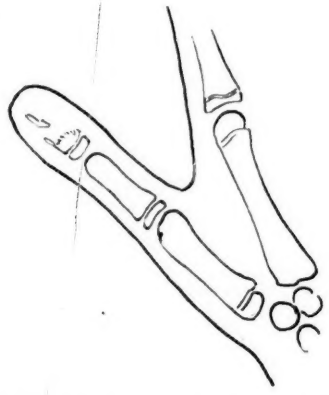
BY FREDERIC JAY COTTON, M.D.,* AND GORDON MACKAY MORRISON, M.D.*

IN osteomyelitis of a terminal phalanx, the type that used to be called bone felon, our primary consideration is of course free drainage, best attained by the "fish-mouth" transverse incision through the pulp a bit below the finger nail.

Later, when the process has become localized and the sequestrum is loose, the problem is an entirely different one, that of securing healing and the best possible regeneration of bone, the most shapely stump and nail that can be obtained.

This stage is reached on the average in six to eight weeks. The x-ray is our arbiter in this.

If nothing is done save to remove dead bone



Necrosis of bone pretty complete, as it is apt to be, distal to the epiphyseal line. In the adult with the epiphysis united and the line gone, the demarcation of the bone infection is usually about the same.

and keep up drainage the process of healing is often intolerably long, and our control of the eventual shape of the finger tip not at all satisfactory.

The thing to be desired is to get a clean wound and close it early, and in this way have a chance to shape up the finger tip as regeneration is going on.

And disinfection *is possible* in the great majority of cases.

The success of the technique here described has been pretty uniformly satisfactory through years of use.

The essence of the method is the removal of infected tissue and disinfection with strong carbolic acid followed with alcohol.

The technique is as follows:

Lay the finger open by enlarging the old incision or making a fresh one—preferably of "fish-mouth" type.

This wound must allow for *excision* of the draining sinus.

If the time has been properly chosen we shall find a walled septic cavity, usually with the sequestrum already loose or readily loosened without cutting. This sequestrum comes out of course.

Then comes removal of slough and excess granulation tissue by careful curetting and sponging until we have a cavity with walls of clean granulation tissue, backed by the periosteum or what is left of it.

Then carbolic (96 per cent) is swabbed about thoroughly, with a second swabbing if there is bleeding. It is well to protect adjacent skin with alcohol sponges. The carbolic is left in contact with the tissues one and a half minutes by the clock.

Then the whole field is flushed out with 70 per cent alcohol and the alcohol *lightly* swabbed about inside.

The wound is ordinarily packed with vaseline dressing strips—not tightly.

If one feels sure of the disinfection the wound may be collapsed under slight pressure, without any drainage.

In the majority of cases there is no further suppuration.

If there is any it is little and usually of trivial consequence, and we may presently go ahead with the shaping up of the regenerating finger tip.

Details of this must vary.

Generally speaking, modeling in of tissues against a dorsal splint brings the best relation of pulp to nail and minimizes the inevitable tendency of the nail to curve downward over the always somewhat shortened phalanx.

Regeneration of the phalanx is a process we can not directly control (in extent) but we can help shape the new bone.

Regeneration seems in no way interfered with by the careful removal of the contents of the infected sac: at all events the periosteum seems less compromised by this than by the long-continued suppuration which is the alternative.

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This type of disinfection, long familiar in cleaning up wounds, successfully used in carbuncles, is applicable to treatment of other *limited* and *accessible* osteomyelitic cavities.

In these finger infections, however, it is so uniformly serviceable as to deserve wide application.

A. M. S., aged five years, was seen January 19, 1934, six weeks after the onset of sepsis. Her septic finger had been drained competently. She was operated on January 20, 1934. The wound collapsed under light pressure without drainage. She was sent back to her doctor. There was no more pus, and she reported here February 13, 1934, solidly healed, for a splint to shape the finger tip more smoothly.

NEW ENGLAND SURGICAL SOCIETY

FORTY YEARS*

BY FREDERICK B. SWEET, M.D.†

THE span of professional experience of the membership of this Society roughly covers the past four decades. A considerable percentage of us have been in active practice during that time; others are, comparatively, beginners; all have lived the period, felt the lure of the job, sensed its forward surge, been inspired with the fire of prophecy which tempts mortal man to dream of what the future holds.

In casting about for a subject on which to address you this evening it occurred to me that it might be of interest to recall something of what the past forty years have brought to the Art and Science of Medicine and particularly to our branch thereof, Surgery.

Such a discussion on this occasion must of necessity be sketchy, superficial and inadequate, colored by personal prejudice, distorted by dogmatic opinion. Therefore you will pardon me, I am sure, if in the development of the general theme these weaknesses creep in and digression and animadversion be necessary in the expression of opinion and belief.

Forty years, a long time—a short time, long as measured by an individual life, short in time itself, long in prospect, short in retrospect. Long or short our forty years will go down in history as a most remarkable period, a period of unrest and change, of strife and movement, of invention and scientific progress, during which things spiritual and material, economic and social, have been shaped and moulded, destroyed and recreated as seldom, if ever before, in so brief a time. We have seen the Earth yield her resources to the pioneer and miner, witnessed the metamorphosis of these material products by the chemist, engineer and manufacturer, seen man turn from the land to the town, industry outdo agriculture, the machine assume the function of man in industry and supplant the beast in transportation. We have beheld with amazement the development and application of electric energy, the discovery of the internal combustion engine and been contemporary with scientific triumphs innumerable.

Into these pregnant years of our remembrance has been crowded greater progress in our own science of Medicine than all the slow march of the preceding centuries could boast. So intensely have we lived, so great has been the change in all that pertains to human experience, that we can but inadequately understand the significance of it all. It may well be that those who come after and enjoy a more detached and less prejudiced perspective will more intelligently evaluate what has been accomplished. Time may prove that much that we now deem progress was only change.

The surgeon, trained as he is in the hard school of experience is, or should be, fitted to judge with reasonable accuracy the life of his time, the forces which influence it, the results arrived at; for of all men he should "see life steadily and see it whole". He faces life in the raw with all its lurid side lights, its tragedies, emergencies and denouements. He is familiar with the whole wide range of human experience, physical, intellectual, spiritual, his mind attuned to its most lofty notes, accustomed to its more sordid moods, sensitive to its motives and impulses, charitable to its every phase.

As a humble member of this so great a cult and with the above background of professional experience ever in mind, I shall attempt to review some of the outstanding accomplishments of the period, trusting that, as the narrative carries on, you may each turn back with me the leaves of the book of memory and come along from there to here, from then till now.

Ere our forty years began, Harvey, Jenner, Morton, Pasteur, Lister, Koch, Laveran, Welch and other immortals had lighted the fires of a medical evolution which was to be fanned into flame by such contemporaries as Behring, Roux, Ehrlich, Reed, Gorgas, Roentgen, Noguchi, Banting and Minot. They were and are the shock troops of scientific medicine whose fundamental discoveries placed its practice on its present foundation, sounded the knell of empiricism and quackery, brought into being modern sanitation and made it possible for clinicians the

*The Presidential Address, read at the Annual Meeting of the New England Surgical Society at Burlington, Vermont, September 28, 1934.

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world over to practice the healing art with intelligence and confidence.

That we may better appreciate what has been accomplished let us consider briefly the state of medicine and its practice as of the year 1893, when I graduated from the Yale School of Medicine. Antisepsis was being practiced in the larger surgical centers, Asepsis as we know it was in its infancy. Epidemic disease raged as of old. Water and milk supplies were often infected, sewerage systems inadequate, the production and handling of food unregulated, housing conditions bad and personal hygiene uninfluenced by education or statute. The facilities for medical education were highly unsatisfactory. Medical schools existed in large numbers, but with some notable exceptions were staffed by incompetent teachers, and lacked proper equipment. Many of these schools were diploma mills pure and simple, run for revenue only. Neither medical education nor practice was regulated by law. Quacks flourished in great number and variety, their activity alone circumscribed by the criminal code.

Hospitals were to be found only in the larger centers of population. They were for the most part institutions which ministered to the poor and outcast, but afforded little or no accommodation for the middle and upper classes of society. In the modern sense their equipment, personnel and physical structure were inadequate. Hospital management was largely controlled by politicians or philanthropic laymen who gave the medical staff indifferent recognition with the inevitable result of ill-adapted physical plants and friction in administration.

Many years had yet to roll by before all concerned realized the need of mutual understanding and intelligent coöperation. The *public* had not become hospital-minded and the average citizen could only be induced to submit to hospital treatment by dire necessity and much persuasion. Then, as now, the better hospitals were staffed by men of character and competence. The rosters of the staffs of that time carry the names of those whose memory we revere even as we respect their successors. Then as now they were the leaders of the profession, the torch bearers, the very bulwark of its being. Their very worth and zeal measurably compensated for the difficulties with which they contended.

The diagnostic methods of those days were exceedingly crude, and in the modern sense practically non-existent. The microscope, the test tube, and the stethoscope were the chief aids to the five senses. The laboratory as we now think of it did not exist. The x-ray machine, the cystoscope and other electrically illuminated instruments of diagnostic precision were unknown.

The Yale Medical School during my student days possessed one small chemical laboratory and a yet smaller laboratory where we were taught something of bacteriology, histology and pathology. All of our teachers in these subjects were engaged in general practice in New Haven and devoted but a few hours a month to teaching. I remember that our instruction in bacteriology was confined to a few perfunctory lectures and the study of a few slides of stained tubercle bacilli. We were well drilled in the method of urinary examination and taught to estimate the hemoglobin content and to count the cellular elements of the blood. Such equipment and haphazard teaching methods left us wondering what it was all about and were of value only in so far as the little we learned stimulated sufficient curiosity to cause us to seek further instruction through the years.

The demonstration of living pathology at the operating table awaited the new birth of surgery and was to be one of the chief contributions of that evolution to medical science. Deadhouse pathology was then the most helpful method of demonstrating disease and was being used with striking success by such teachers as Osler, Fitz and Welch.

Typhoid, diphtheria, meningitis, the intestinal infections of childhood were endemic and epidemic, their course little influenced by medical care. The surgeon was in no better case. Hospital gangrene, pyogenic infection, erysipelas, tetanus, often made his wards a place of dread and death. His inability to diagnose disease beyond his sight and touch limited his field to such pathology as affected the surface of the body.

Medical and surgical literature, particularly current literature, was limited in quantity and comparatively poor in quality. Medical organizations exerted an indifferent and feeble influence on professional thought and action.

Such, roughly, was the state of medical science and practice when our era dawned, such the background from which evolved the evolution we have witnessed, such the stage setting for our forty years. It would be futile to review the record of accomplishment in detail. It is familiar to us all. Sufficient be it to recall that the cause of one disease after another has been discovered by the researcher and brought under measurable control by the clinician and sanitarian.

The earlier years of the period witnessed the conquest of many of the germ-borne diseases and gave us the Roentgen ray. The mid season provided radium and the many illuminating diagnostic instruments. The latter years have contributed much by way of the perfection of these instruments and enlarged our knowledge of the degenerative diseases, such disorders as diabetes and the anemias, and developed a world-wide zeal in the study and treatment of cancer. During the whole period the medical profession has ceaselessly fought disease

by every available means, coöperated in every practical way with workers in the allied sciences, and embraced every opportunity which held promise of a better understanding of diseased conditions. Quarantine, preventive and therapeutic vaccines, the control of host and carrier, of food and water supplies, antitoxins, serums and specific drugs have accomplished in these few years what all previous recorded time had failed to bring to pass.

The science and art of surgery has been even more strikingly influenced, profoundly changed. Anesthesia and asepsis, the basic requisites of operative technique, were an inheritance bequeathed by the preceding period; a birthright essential to all that has since been built. The full establishment of these fundamental contributions necessitated the organization of a trained personnel of surgeons, nurses, administrators, the development of adequate equipment, the building of a new type of hospital, the establishment of methods suited to the new order. It was necessary to build up a specialized current professional press available to all.

So well has this phase of the problem been managed that current surgical literature as we know it in quantity, scope and quality compares most favorably with that of the other learned professions. Its influence on surgical thought and practice and its resultant part in building the new order cannot be overestimated. Through it the humblest may express himself and from it the greatest glean instruction and inspiration.

Concurrently with this growth of the surgical press has come the organization of surgical societies, local, state, national and international, with facilities for the exchange of ideas, opportunity for good fellowship and mutual understanding. The influence of these organizations on public health legislation, in promoting the standardization of hospitals and in establishing the requirements of qualification for surgical practice has been far reaching and altogether helpful.

Medical education impelled by necessity has made astounding progress during the past forty years. Not a little of this progress has resulted from the discontinuance of many poorly equipped and staffed schools. Those deemed worthy of continuance now operate, with a few notable exceptions, in a manner which does credit to their teachers and management. Their educational standards are high, their student body carefully selected, their graduates an honor to our profession.

The establishment of surgical centers with group practice and teaching has been an innovation of our time. Certain of these clinics have exerted a very important influence in that they have set up standards widely followed, served as research centers and have trained specialists who have brought to widely separated areas the benefits of the experience and knowledge there gained.

In all that has gone forward perhaps the evolution of the hospital during the past forty years has been the most essential, for in very truth the hospital is the surgeon's workshop, the one institution upon which he is absolutely dependent, whose interests are his interests; the institution which deserves and should enjoy his constant, his unwavering loyalty.

The modern hospital at best is a marvel of convenient workable arrangement equipped with every necessary means of diagnosis and treatment, staffed by competent doctors and nurses, managed by interested citizens working in coöperation with each other.

The progress we have witnessed has been marred with many a step aside and on occasion its forward movement diverted by the rubbish of error; but for the most part "Excelsior" has been the motto, better surgery the goal. The crude and bungling surgical methods and technique of the early years have changed to the all but perfection of the present-day operative procedure.

The field of surgical action, no longer restricted to the extremities and the body surface, has become all embracing, limited only by the individual surgeon's skill and boldness. Every organ, every cavity, every tissue where pathology lurks is open to surgical attack. By reason of modern diagnostic facilities it is now possible to locate and differentiate in vitro that which formerly was recognized only in the dead-house.

Having spoken somewhat of the progress our forty years have wrought, common honesty compels us to speak of the less pleasant side of the picture, for, as before intimated, there are always elements attendant upon progress which make for change rather than betterment.

The freedom of action which anesthesia, asepsis and increased diagnostic facilities brought, bred a tendency in certain surgeons to do unnecessary operations, and to attempt what they were in no way qualified to perform. Ill-trained, reckless, for a time such individuals became a menace to many communities and even to-day their kind still curse our guild. Although such practices were perhaps only to be expected, they were altogether reprehensible and often resulted disastrously for the patient and brought both surgeon and surgery under suspicion and criticism.

The unscrupulous operators were not the only ones responsible. The older of us remember with chagrin when normal ovaries were removed for the cure of psychic disturbances, eye muscles cut for the cure of epilepsy, testicles ablated for the relief of prostatism. The youngest remember the vain attempts at the restoration of

sexual vigor to the senile, credulous and wealthy, which our gland transferring contemporaries have but yesterday advocated and practiced.

Fortunately "the years bring much that the days have never known" and it may be truthfully said that such practices, unscrupulous or misconceived, are less often advocated and practiced than of yore. The surgery of 1934 is more intelligent, more sane than that of 1894.

The new surgical birth also encouraged numerous practitioners to specialize in surgery or to do such operative work as came within their reach by way of their general practice. The majority of these men were surgically untrained and attempted to learn the job as they went along. That sort of surgical training has fortunately been supplanted by the intensive and thorough preparation in medical school, hospital and clinic, which we now consider requisite. In my opinion the time will soon come when the self-christened, overnight surgeon will be but a historic memory.

The ever-broadening field, the improved means of transportation, the perfection of hospital organization and the consequent increase in the amount of work a given surgeon could perform, brought a more lavish, even reckless way of life with mounting expense for overhead and need for increasing income. As a result the spirit of commercialism crept into the consciousness of certain surgeons displacing in varying degree that spirit of altruism and unselfish service which through time has characterized the members of our guild. Whereupon came in some quarters the big fee, the time-clock attitude, the treatment of patients as just cases, the pernicious custom of fee-splitting, the forgetfulness of the humanities, in fact a state of affairs quite contrary to the best traditions of the profession.

This tendency came to its full flower during the years of our late prosperity, and praise be, has been already measurably curbed by the present period of adversity. For a time we could but sadly agree with Garth when he said, "How sickening Physick hangs her head and what was once a service, now's a trade."

Having laid bare some of our own weaknesses, it will, I am sure, be entirely proper to speak as frankly of certain unwholesome tendencies which during the same period have sprung up in the allied nursing profession.

Training schools for nurses had been established in a few of the larger hospitals previous to our era and the beneficent influence of intelligent, directed nursing care was already making itself felt and giving promise of service since realized.

The original aim of the devoted women who founded our schools of nursing was the training of young women for the care of the sick. By precept and example the early leaders instilled in their pupils the spirit of self-sacrifice, the zeal for service, the will to ease human suffering. The patients' comfort and well-being were of first importance, their own of minor consequence.

This appeal so impelling with the best type of woman called into the ranks of the profession in the last decade of the nineteenth and the first of the twentieth century a group of devotees which revolutionized nursing care and raised high the benevolent standard of sacrificial service. Seldom in history has a great need been so completely, so efficiently met. From Sarah Gamp to Florence Nightingale was all but as big a jump as from Ambroise Paré to Joseph Lister. Womanhood was glorified, the sick given relief and comfort, the medical profession incalculable aid.

At first her ministration was simple. A properly made bed, a properly given bath, a drink of water, a skilfully done dressing, a reassuring word, the carrying out of orders; this was all, but it brought courage and comfort to the patient, a sense of security to the doctor.

Then came the changing and more technical development of medical and surgical procedures and the necessity for a more highly trained nursing personnel. Came higher preparatory educational requirement, a more theoretical course of training, less stress upon the little bedside womanly ministrations which the sick so yearn for, more stress upon procedure, diets, technique. Less emphasis was placed upon sacrifice and service, more on pride of profession, solidarity of cult, and personal advantage. Psychology, chemistry, bacteriology, anatomy, pharmacology, physiology to the fore. The wash-rag, the water-glass, the toothbrush, and the bedpan relegated to the patient herself, the ward maid, or manipulated as sparingly and gingerly as possible.

Short hours, high fees, no night duty for some, no day duty for others, no contagious diseases, no cases in homes, no this or that until even this conservative society some years ago was constrained to protest and beg for relief, only to be read a lecture by the then High Priestess of New England nursing.

Many of you will remember when the late Dr. John Gile, then our President, with a benignant smile asked the Secretary to lay the communication on the table, where I suppose it still reposes in the limbo of useless things.

Like other evils, these which beset our nursing sisters brought their own remedy, aided by the compelling urge of the past four years of depression. Nurses again seek work, properly do their work, have little tendency to pick and choose and are altogether a joy and help as of yore. Moreover, the better training they receive is now put to the test of service and is proving its essential worth in practice. So here's to our nursing sisters! May the future of their profession realize the promise of its past!

With the dawn of our forty years the Quack, as formerly known, was legislated out of business. Mountebank and charlatan, though he was, he was often an interesting fellow and on occasion could teach the doctor much pertaining to the art of practice. His field of action was usually circumscribed, his career short-lived, his power to harm correspondingly slight. He was superseded by the healing cults and pathies which under one form or another have flourished through the intervening years. Associated with a religion or mysticism, advertised by propaganda, thriving on criticism and persecution, clothed with respectability by law, politically powerful, these cults grow and flourish like the proverbial bay tree, until a considerable percentage of our population, even here in New England, are directly or indirectly influenced in matters of health by their teaching and submissive to their methods of treatment. The vogue of these cults is to my mind the most sinister threat to public health now existent. They are potent for evil chiefly through the clever alliance of healing and religion which has been set up by their deluded and psychic originators.

Born of ignorance or worse, nurtured by the innate credulity of the masses in matters pertaining to personal health, these cults checkmate the doctor, embarrass the sanitarian, and through opposition to necessary legislation continually and adversely influence public health administration. Only a rising public intelligence engendered by education and constant effort on our part can control the menace they offer. We as a profession should keep constantly in mind Plato's dictum, "Education is a life long business," both as applied to ourselves and the lay members of the population.

Another troublesome development of our time has been the establishment of numerous small town hospitals. Although there are of course many exceptions, in general these institutions have not only been unnecessary, but have been a real menace to the health and well-being of the communities where they exist. Usually poorly financed, often housed in buildings formerly used as dwellings, these institutions are but sorry counterfeits and unworthy the name they bear.

The surgery therein must be done by surgeons from the nearest city, the preoperative and postoperative care left to whoever refers the case, or by local doctors whose surgical experience is of necessity limited.

Attempts at control of this type of hospital by the American Medical Association and the American College of Surgeons have brought some improvement, but conditions are still far from satisfactory and call for further and compelling regulation.

An allied problem is the control of the small private surgical hospital with which many of our cities are infested. Many of these institutions are as physically ill fitted as are the small town institutions for surgical work, and are in addition often owned, managed and staffed by one man who is for some reason out of step with his fellow practitioners and denied affiliation with regular hospital establishments.

Let it be understood that the foregoing in no way refers to the many well-adapted, supported and run small town and private hospitals. Such merit our confidence and the public patronage.

Some time back I referred to the surgical clinics or group practice organizations which have during the past few years come to exert such an influence on modern surgery. For the most part, as before said, that influence has been good, but of necessity such a rapid and revolutionary innovation in method has been attended by certain undesirable features which we may speak of in the spirit of well-wishers. To one looking in from the outside comes the impression that there is in many of the clinics a tendency to lose touch with the human and individual side and drift toward the case and impersonal attitude of management.

We are told, by patients who have visited these clinics, of weary days spent in going through the diagnostic mill, of being shunted from one office to another, from one department to the next, of being x-rayed from crown to toe, bronchoscoped, cystoscoped, metabolized, proctoscoped, cardiographed, until having accumulated sufficient literature and pictures they are at last passed on to some individual who takes an interest in them as sick human beings, tells them what ails them and prescribes relief.

This suggests a thought which is as applicable to us as individuals as to the clinic. Is it not possible that the geographic and typographic routine of mechanized modern diagnosis is being carried too far, if the very mechanical perfection of it does not, by too great dependence and deference on our part, lead us at times to overlook the obvious and approach the ridiculous? The five senses assisted by a little New England common sense are still the backbone of diagnosis. Let us never forget that.

The President-Elect of the American Medical Association in his annual address well said, "The diagnosis of the future will be an intellectual accomplishment, not a mechanical computation."

However, I would not be understood as underestimating the value of these diagnostic instruments and means; rather would I counsel their legitimate use and the intelligent interpretation of findings. Their routine use either because of mental laziness or for purposes of showmanship should, however, be discouraged.

The times have bred another tendency which we should be thoughtful about, namely, that of

outsiders to compel by legislation or propaganda radical changes in our methods of practice. This attempt, in its essentials, aims to force upon the profession a state-regulated program for the care of the sick. It is fostered by reformers, by planning experts hired by the Foundations and by self-appointed busybodies who seek to upset the experience-proved present methods of medical care. Ignoring such facilities as hospitals, free clinics, industrial medical services, municipal welfare care and the willingness of the average doctor to go wherever called and do his work whether paid for it or not, they bombard the most altruistic profession extant from the lecture platform, by radio, through the press and by every other possible means, demanding the impractical and impossible.

No sane man will deny that growing populations, urban concentration, and rural isolation are daily creating new situations which must be met by new methods of practice. On the other hand what sane man can believe that the needed changes as they arise can be better met by outsiders than by medical practitioners themselves?

The cry of shellback and conservative as applied to a profession that has made greater progress than any other of our time, that yearly does more for humanity than any other, seems out of place and ridiculous.

It must be acknowledged, however, that all this investigation and furor may have been salutary as a counterirritant, a needed spur to action from within. There are indications from all over the country that our profession is alive to the situation and working out ways to meet it.

Let us now have done with our chronicle and briefly consider what impression these epochal changes have made upon our contemporary professional life.

Such opinions, impressions and animadversions as I am about to express are recorded with the full realization that "Experience is fallacious and judgment difficult." If they possess any value it will derive from the fact that he who speaks has lived the years in question, first as general practitioner, then as specialist, has worked with every type of man known to the cult, made every possible mistake, suffered every remorse, faced every emergency, failed and failed again, and in the process experienced such joy as goes with the job. Mayhap as the years have rolled along he has acquired sufficient equanimity and complacency to view men and things through glasses tinted by kindness and sweet charity rather than stained by jealousy and prejudice. If not, experience is a poor teacher and life for him a farce.

It is his opinion that a new and better type of practitioner has been evolved, that medicine and surgery are more intelligently practiced than when he began, that the sick human being is in every way better cared for, that the average practitioner is a better type, better prepared for his job, more intelligent in what he does. He may know less of the art of medicine, but he knows more of the science.

He may be more materialistic, less devoted in a sense than his predecessors, but he gets people well, and after all commercialism with knowledge is preferable to idealism with ignorance. He may seem businesslike, but he seldom burlesques his calling. Bluff and cant have small place in his way of life and the petty tricks and ways of the mountebank have no attraction for him.

He knows emergencies when they arise and seldom puts off till to-morrow what should be done to-day. If unable to administer indicated treatment he calls in someone who can. He does not attempt to avoid operation in acute appendicitis nor treat acute meningitis expectantly.

He reads current medical literature, attends medical meetings, visits clinics and avails himself of every possible means of acquiring the best and latest medical knowledge.

He is familiar with laboratory method and skilled in the use of diagnostic instruments. His very equipment and environment, however, at times prove a handicap. The system stressing, as it does, uniformity of standard and method is less conducive to the production of outstanding individuals and consequently, from the standpoint of personality, the doctor of today often seems a bit colorless as compared with his forebears.

Personality, however, is as important as of old and now as then has a very real influence on every doctor's career. He who possesses it is greatly blessed; he who has it not is doubly cursed.

Coincident with the absorption of the individual by the cult has come the eclipse of the art of medicine by its science, the rise of the specialist at the expense of the general practitioner, and the passing of the type of men known as "Doctors of the Old School."

These resourceful kindly individualistic characters have been superseded by highly trained men who know much more about medicine, less about people, their spirit of service sometimes tainted by the hope of gain, their charity tempered by self-interest.

Such tendencies are unfortunate, but temporary. Already the general practitioner begins to recover his lost ground as specialism becomes top heavy and the people grumble. The public will soon again demand a family doctor, not a medical director, an individual, not a composite intelligence. The specialist of the future must show reason for his existence and be of sufficient skill to command patronage and discourage competition. One man will then do what three or four are now doing and the personnel

of the profession be redistributed. The art of medicine will again assume its rightful rôle of helpmeet and aid to the science thereof.

The past forty years have brought about great improvement in the internal relationship of our profession. The old antagonisms and acerbities have for the most part given way to a spirit of tolerance and coöperation. This happy change is largely the result of medical organization and improved transportation. Justice and charity are always engendered by personal contact. It is hard to be unkind to those with whom we constantly associate. We have learned to know with Emerson,—

> "Life is too short to waste, in critic carp or cynic bark,
> Quarrel or reprimand; 'twill soon be dark;
> Up! Mind thine own aim and God speed the mark."

The time also has tremendously influenced the doctor's relation with the public. The people are more intelligently interested in their own and the public health, more appreciative of the medical profession. Legislation and health propaganda have given them a point of view more in keeping with the facts than they have before enjoyed. Their very interest and knowledge often force the doctor to his duty. They demand that well-known diagnostic aids be used and ask embarrassing questions if proper treatment is not promptly applied.

Their zeal, however, not infrequently makes them prey to the unskilled and unworthy and their innate love of the fantastic and occult delivers them into the power of faddists, religious cults, manipulators and voodoo doctors.

Like the drowning man who resists his rescuer, so these resist every effort of scientific medicine in their behalf. Antivaccination and antivivisection societies, personal liberty leagues and other organized fanatics fight us by every possible means. The very perfection of our achievement furnishes them their argument. Controlled disease abolishes fear thereof, and makes the ignorant scoff at its possibility to harm.

It is a long jump from the tribal medicine man to the modern medico and the man in the street is not as yet quite prepared to take it. That his enlightenment has not kept pace with our own is not surprising and the fact should not disturb our equanimity, nor adversely influence our endeavor.

Ours is an honorable and satisfying calling, the most worthwhile job known to man. Our time has been a part of that period of which Sir William Osler said, "In little more than a century, the medical profession has done more for the race than has ever before been accomplished by any other body of men."

To have worked at such a job, however humbly, to have lived at such a time, however inadequately, has been a high privilege, a mighty inspiration, a blessed experience. To look forward to what such a time implies is quite beyond our power, but this we know, the unfinished job awaits those who follow. Its challenge will be accepted.

The future, like the past, will be served by those competent to meet its needs, for,

> "The men bulk large on the old trail,
> Our own trail, the out trail,
> They're God's own guides on the Long Trail,
> The trail that is always new."

HOSPITALS NOW AND THEN*

BY FREDERIC A. WASHBURN, M.D.†

THE story of the building of the voluntary hospitals of the United States is a long one. For the purposes of our discussion it may be epitomized. We may disregard the infirmaries of almshouses which preceded the regular hospital establishments, although it was the contemplation of the shortcoming of the former in the care of the sick and the insane which furnished the motive power for the foundation of the latter institutions. This was notably the case in our own City of Boston.

The first three voluntary hospitals were established in what were then the three largest cities of the land, Philadelphia, New York and Boston. The earliest of these, the Pennsylvania Hospital, was opened in the year 1752. These three hospitals were much alike in their scope and planning; each had two branches, one for the insane and one for patients with acute general diseases. We are concerned to-day with the general hospitals, not the branches for the care of the insane.

These general hospitals were organized like the English hospitals of the period. Their patients were the poor only, those who were unable to pay their doctor and very small sums, if anything, to the hospitals for their board. The staff of doctors was unpaid in money though many times richly rewarded by the experience gained and increased reputation because of connection with the hospital. Each of these three institutions had an agreement with a medical school whereby teaching was permitted in its wards. In most instances the important teaching positions in the school were held by members of the hospital staff.

These original hospitals were privately managed institutions. Their funds for building and

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endowment were for the most part raised by public subscription and generous gifts and bequests from the wealthy, fortified by contributions from the State. Their destinies were presided over by a Board of Trustees, the majority of which while elected by a hospital Corporation were practically a self-perpetuating body. Other members of the Board were appointed, in the instance of one of these hospitals, by the Governor of the State. Members of the Staff were appointed by the Trustees, usually upon nomination of the Staff.

As the country grew in population and area, other hospitals were founded and governmental hospitals began to appear. We are not concerned for the moment with the Federal hospitals of the Army, Navy and Public Health, Marine or Veterans Hospitals. The governmental institutions in which we are interested this afternoon are the Municipal and County Hospitals. The relief to be furnished the sick poor by voluntary hospitals and private benevolence was naturally limited. The demands of this group outgrew the facilities which could be furnished by the voluntary hospitals from free bed funds or annual gifts for the purpose. After the Civil War in the Nineteenth Century, and in the Twentieth Century, many municipal and county hospitals were founded for the care of destitute citizens. Thus the support of the bulk of this group in time of sickness was placed upon the tax funds where it properly belonged. Nevertheless a very large measure of relief of the sick poor has been and is being given by the voluntary hospitals of the land. In the instances of Maine, Connecticut, Pennsylvania, and Mississippi, grants are made to privately managed hospitals from public funds. This is not the best way of assisting these hospitals from tax funds. In other instances, notably in New York City, voluntary hospitals are reimbursed by the City on a per capita basis for the care of its indigent sick. This is a fair and proper method if the per capita sum is fixed at a point which will reimburse the hospital for the expense incurred.

From the simple beginnings which have been described, hospitals have not only vastly increased in number but in complexity. This has been most noteworthy in the last thirty years. With the coming of anesthesia, the knowledge of asepsis, the x-ray and the many laboratory procedures necessary for diagnosis and treatment, more and more has it appeared necessary to bring to hospitals patients who were formerly treated in their homes. This is especially true of surgery.

When it came to be realized that the patient's chance for correct diagnosis, and in many instances for life itself, was much more favorable in the hospital than in the home, there developed a demand first, that private wards for the well-to-do should be provided at our hospitals and then, that provision should be made for patients of moderate means. Fortunately this demand came early enough with us so that these facilities were provided in connection with our established hospitals before physicians had to any large extent acquired vested rights in their own small hospitals or "nursing homes". If one is in doubt about our favored situation in this respect, he has but to compare it with that of England. The modern hospital situation is further complicated by the development of schools of nursing, medical social service, dietetics, libraries, and occupational therapy. In our larger hospitals the numbers of resident physicians and surgeons and of internes have enormously increased. In teaching hospitals the medical students are introduced to regular duty in the wards as clinical clerks. With all these factors, together with the management of ambulances, a large general store, one or more drug stores, kitchens, dining rooms, pay cafeterias, laundry, a power house, shops for carpenters, painters, electricians and other mechanical trades concerned in maintenance and repair, it is evident that the modern hospital is indeed a complex institution.

With the clinical developments of which we have just spoken, staff organization has changed. From the simple form copied from our English models where all professional service was unpaid, where the staff was large and its members rotated in caring for the patients, we now have in our large teaching hospitals with the voluntary staff a full or nearly full-time Chief of each professional department who, usually paid by hospital and medical school, devotes himself to the interests of that department and forwards the care of the patient, medical education and research. Such nearly full-time Chiefs of Medicine, Surgery or other clinical branches, encourage enthusiastic young men to devote much time to the advancement of knowledge, each in his own specialty but each with close contact with other special departments and their endeavors. The presence at the hospitals of laboratories with their full-time, skilled chiefs, laboratories of pathology, chemistry, biochemistry, bacteriology, roentgenology, metabolism, and others, not only make the work of these ardent young men and women in the clinical groups possible and effective but furnish the opportunity for advancement of knowledge and the training of young men and women in each of these departments.

Our ideas of the scope of hospital administration and such administration itself have greatly expanded in the last twenty or thirty years. The training and equipment which was needed by a hospital director a generation ago is still needed but vastly more is necessary also if he is to meet satisfactorily the hospital prob-

lems of these times. He must clearly see the objects of his hospital; first, the kindly, skillful care of the patient with all the hospital's forces directed primarily toward making for him a correct diagnosis and when this is made providing him with every facility known to modern science to effect a cure. All this accompanied by the most kindly nursing and thoughtfulness of the patient's best interests in all directions. The idea that the hospital exists primarily for service to its patients and the community must be thoroughly learned by all its officers, staff and employees. The hospital director then must clearly see the other main objectives of his hospital: Education—that of the public in matters of health, the medical education of physicians of the community, the staff of the hospital, its resident physicians and internes and medical students—education in all the allied branches of medicine which function in a hospital. Hospital administration, nursing, social service, dietetics, libraries, the technique of laboratories, occupational therapy and others. Hospitals may well accept the function of assisting in the education of the public in the avoidance of medical cults. People who are credulous and uninformed are readily victimized, by plausible charlatans or by sincere but ignorant and misled cult enthusiasts. Physicians, health departments and hospitals have not done their duty to the public in helping them to protect themselves. Hospitals and their representatives can advertise, speak over the radio, post bulletins and in many ways frankly and openly tell the people just what scientific medicine is, its possibilities and its limitations and warn them against the fads and cults upon which so much money is wasted. A similar course of publicity may help to warn people against spending their money on patent medicines and high-priced proprietary preparations most of which have equally effective low-priced substitutes.

A third function of the hospital which he must bear constantly in mind is the advancement of human knowledge in all medical branches and of the functioning of the bodies of men in health and disease.

A fourth of the hospital's obligations is the public health. The education of the community in matters of health has already been touched upon. The hospital has a great opportunity here through its intimate contact with members of the community, patients both house and outpatient, their relatives and friends. Many hospitals have classes for various disease groups, diabetics, cardiacs and others. There are classes for prospective mothers and for mothers and children. Hospitals can help the public health by prompt hospitalization and isolation of contagious disease, by development of a follow-up system and the discovery and treatment of contacts in venereal and other contagious diseases.

The hospital director is the executive officer of the Trustees of the hospital. He should also be the Secretary of the Executive Committee of the professional staff. This committee of the Staff, if it does its full duty, is one of the most powerful of forces for the good functioning and wise advancement and development of the hospital. Its job is to nominate to the Trustees for all staff positions. The reputation of the hospital, the determination of its future policy, whether it advances with the times and makes valuable contributions to medical knowledge or whether it lags and deteriorates, is bound up with the character of the members of this Executive Committee of the Staff and the thoroughness and intelligence with which they do their work of nomination and consideration of hospital policies and their recommendation to the Trustees. Such a committee composed of the right men, meeting regularly and acting conscientiously, is a great source of strength to Trustees and Director.

The competent hospital director must be a good executive who can plan and effect an organization which will decentralize and delegate functions in such a way as to promote economy and efficiency and at the same time keep for himself effective control with a clear picture of what is happening in all parts of the organization. With all this he must leave himself time to take an active part in his national hospital associations and other community and national service.

There never was a time in the history of hospitals when there were so many problems facing them, nor was there ever a time when so much thought was being given to these problems and so much useful work in solving them. The country is particularly fortunate in having the great foundations and professional associations to furnish the means and some of the personnel to make these studies. The very exhaustive and important study of the Committee on the Costs of Medical Care has centered our thoughts on how to provide adequate medical care to all the community. The well-to-do are provided with private wards in our voluntary hospitals where they can receive the best of care and pay fees which will properly recompense both physician and hospital. Attempts have been made in a few places to do something for people of moderate means in time of sickness. The Baker Memorial of the Massachusetts General Hospital is an outstanding example of what can be done to give to this group of people the very best of medical care and nursing at a moderate price. Due to generous aid of a large benefactor and many smaller gifts, it was possible to erect this building without there being the necessity of making the patients pay to cover interest upon the investment. The Julius Rosenwald Fund helped share the deficit of the first three years of operation. Every ef-

fort is made to keep the expense to the patient at the lowest point consistent with supplying this group of patients with the best service for diagnosis, care and relief or cure. To avoid the very considerable expense of special nursing, the floor nursing is made more than adequate. Thus it is necessary to use special nurses only when a patient needs constant care or for a short time immediately after operation. One of the very important contributions to the success of this demonstration was made by the professional staff who volunteered to limit their fees to these patients to very reasonable sums and established a fee table for this purpose. Greatly beneficial as this hospital has been, much as it has helped people of small incomes in times of sickness, nevertheless the fact remains that although average charges are small, maximum charges may still be considerable in instances where a patient stays in the hospital a long time and requires special nursing. A system of insurance then to spread the cost would seem to be indicated. Such an insurance plan should probably be voluntary in type, controlled by a non-profit corporation. It should provide for small periodic payments by its members who in times of sickness would find their bills, both hospital and medical, paid for them. What a godsend this would be to thousands upon thousands of men and women who now live in dread of sickness with its unpredictable costs. Such a scheme would allow them to budget their sickness expenses, pay their way in a self-respecting manner and assure them of the best care in times of illness. It would assure the payment of modest fees to hospital and doctor and be a blessing to all three parties to the plan. It is quite within the possibilities that voluntary insurance like this will finally be found to be applicable mainly to the better educated and more intelligent groups and that compulsory health insurance which will include hospitalization will be adopted for the masses of the employed. Whichever form, voluntary or compulsory, or both, finally goes into effect it is fair to assume from the experience of other countries that patient, hospital and doctor will be benefited.

Then comes the question of the care of the indigent. Who is to pay their bills in hospitals in times of sickness? It is a fair statement, I think, that American public opinion and in many cases custom and law demand that this expense be met from public funds. There are many sore situations, however, and much injustice to voluntary hospitals which in many instances are carrying much of this load without recompense. The burden has enormously increased in the last few years. Because of the depression, voluntary hospitals have suffered a serious diminution in capital gifts, in annual gifts and in income from patients. At the same time the demand upon them to care for free and part free patients has greatly increased. Hospitals have responded to this appeal nobly and many have gone into debt rather than turn patients from their doors. Their dilemma should be recognized more generally and steps taken to put their finances upon a more stable basis with a broader community support. I would submit the proposition that the free work done by voluntary hospitals should be limited to what they can pay for from the income of funds given distinctly for that purpose and that these hospitals shall be paid by public funds upon a per capita basis for the cost of any further hospital service given the indigent. Whether these public funds should be municipal or county, state or federal would depend upon local conditions. Each community should so far as possible stand upon its own feet. Municipal and county hospitals must of course be used to capacity, but when that capacity is exceeded public funds should pay the bills of the indigent in voluntary hospitals. In figuring the hospital bills of the destitute to be charged to tax funds it may be argued that they should represent only that part of hospital expense concerned immediately with the care of the patient. The costs of medical education and research may well be deducted before the city or county bill is figured. Where then is the money to come from to defray the expense of education and research? It may come from the medical schools and universities in part. If the fountain of private gifts runs dry, nation or state may need to make grants for this purpose. In many states which support universities appropriations for such purposes are regularly made now, though not to private hospitals except in the instances already quoted. It may be suggestive of one very good way to solve the problem of conducting a municipal hospital and keeping it free from politics and maintaining high standards of care if one studies what has been done by the City of Rochester, New York, at the Strong Memorial Hospital. There the City has given over the care and nursing of the patients, with many administrative functions, to the University Hospital and its Staff.

It may be that hospitals should shoulder the burden of visiting the indigent sick in their homes. If this is done, the City or County should reimburse the hospital for its payment to the doctors and nurses for the services rendered, always upon a per capita basis.

Bequests and gifts to endowment and annual gifts for maintenance will always be required by voluntary hospitals, for they must build and renew to keep up with the progress of medicine and the needs of the community. Until municipalities and counties can be educated to pay for services rendered the indigent and until group hospitalization is installed in such a way that wage earners and people of moderate means may pay their bills on insurance principles,

large sums must annually be contributed to our voluntary hospitals, or many of them will be unable to continue.

The question of the remuneration of physicians on the staff of the hospital for services performed in the care of indigent patients is a hardy perennial which flowers with especial vigor in hard times. It cannot be answered lightly, nor would the answer be the same in all voluntary general hospitals. In large teaching hospitals Chiefs of Staff and some of their assistants are paid salaries and included in their duties is the care of indigent patients in their wards. Even in these hospitals the bulk of the work in the routine care of patients both house and out-patients is done by a volunteer staff. It may fairly be argued that these men are amply repaid for their service to the poor by the opportunity which their position gives them to keep in touch with the advances in knowledge of their profession, to gain experience and the prestige which their hospital connection gives them. When the staff is a closed one, its members may hold privileges of having patients in the private and semi-private wards which are of great value to them.

These arguments would not hold so true of general hospitals where no teaching is done or research conducted. There are difficulties besetting the path of paying the physicians caring for the indigent patients in these hospitals. If the hospitals in question be public hospitals there is the danger that paid positions upon the staff would become political plums and appointments would be made not from merit but for political reasons. This is a real danger in public hospitals and to a lesser extent in voluntary hospitals. What would be the source of the money for these payments? Certainly not from the funds of voluntary hospitals. A compelling reason for this answer is that such funds are non-existent. It would seem, then, that the only way that payment to the hospital doctor for his care of the indigent patient would be upon a per capita fee basis from tax funds. If this were done for voluntary hospital staffs the staffs of public hospitals would expect it and the way opened for a spoils system in our hospitals. We should think long and carefully before we start such a system.

One might continue to speak of many other hospital activities that are in the air or are really taking place. A recent tendency in general hospitals to add psychiatric wards is to be noted. This encourages us to believe that progress in our knowledge of mental diseases may soon equal the advances made in our understanding of other forms of sickness. Such information is far more likely to come to us when patients with early symptoms of mental trouble are hospitalized in a great modern general hospital where teaching and research are encouraged than when these patients are by themselves away from the experts upon the other ills of the human body and from the laboratories in which these men work. Hospital councils are being formed with their group planning as opposed to the unrestricted individuality of the hospitals in the past. Mrs. Mary Hicks Bachmeyer, who has just made a report upon Hospital Councils to the Council on Community Relations and Administrative Practice of the American Hospital Association, says, "Along with other agencies at the present time, hospitals must necessarily face some restrictions of the right of individual institutions to do as they please. There is an increasing obligation upon institutions to adapt their policies or programs to the needs and desires of the community. Given the fact that in many cities a large number of hospital beds are not occupied and that this condition existed before the depression, there can be no doubt that the supporting public will demand careful scrutiny of the use of hospital facilities and particularly of future expansions and re-locations. Relationships between governmental and voluntary hospitals in many communities and of all hospitals to the organized medical profession are also problems of major importance at the present time. With none of these questions can individual hospitals deal successfully while acting alone." There can be little doubt that we shall see more community planning in the future than in the past and that hospitals like all men and other institutions must join in such planning.

We might speak of the effect upon hospitals of the recovery acts passed by Congress in the last year or two, and the success of the American Hospital Association in getting hospitals relieved from the application of many of them, the dangers to voluntary hospitals of extreme socialization by the extensive building of Federal hospitals or possible attempts from Washington to control the voluntary hospitals, of the studies now being made by the Council on Community Relations of the American Hospital Association in the way of standardizing and clarifying hospital procedures and the coöperation with that Council of the College of Surgeons and the American Medical Association. Suffice it to say that all this indicates better hospital coördination, better planning and more mutual help by all professional groups connected with hospitals.

The College of Surgeons and its distinguished President, Doctor Greenough, have set an example of willing coöperation and helpfulness and hospital administrators are grateful to them. Just as in most individual hospitals, Staff and Administration are working harmoniously for the common good, so it should be in the broader field of the country-wide associations. A beginning has been made; let us make sure that it continues.

BRITISH HOSPITAL CONTRIBUTORY SCHEMES*

A Description of the Voluntary Hospital Insurance Plans Now Utilized by English Workmen and Their Families

BY SYDNEY LAMB, M.B.E.†

IN planning my address I shall endeavor to explain:

(a) The changes which occurred in the financial position of the British Voluntary Hospitals, consequent upon the changed economic conditions resulting from the European War, and the reasons which necessitated the change in their methods of obtaining Annual Revenue.

(b) The purpose of Voluntary Hospital Collecting Funds which were strengthened to meet the new post-war conditions.

(c) The results which have been achieved by this new method of Hospital finance.

(d) The problems which have been created, and the difficulties which have yet to be surmounted.

THE POST-WAR SITUATION

With the changed economic conditions resultant upon the War, the Voluntary Hospitals found themselves facing an entirely new set of conditions. The costs of every commodity, especially drugs, dressings, and medical equipment, had considerably increased. The community was found to be making increasing demands upon the services of Hospitals. With an annual deficit of four million dollars, the Voluntary Hospitals were forced to make good these deficits by utilizing legacies which prudent Treasurers would have preferred to invest for endowment or utilize for capital purposes, and further to resort to borrowing from the Banks. Charitably disposed persons no longer possessed the same financial reserve as formerly and found themselves compelled to curtail their subscriptions to Voluntary Hospitals. The new rich had not yet learned to use their newly acquired wealth in community service. The Hospitals found themselves facing a very uncertain future. What was to be done?

A commission appointed by the British Government, under the Chairmanship of Lord Cave, to report on the problems of Voluntary Hospitals, made the following important recommendations:

(a) That it will in many cases be desirable, in order to avoid competing appeals by different Hospitals, that organized collections (i.e., contributions from wage-earners) should be made by some central body, such as a Regional Voluntary Hospitals Committee, on behalf of all the Hospitals in the area, and should be distributed among the Hospitals on some agreed basis.

(b) That these weekly contributions should not give the wage-earners any claim to priority of treatment — admission to Hospital to be determined on medical considerations only.

(c) That it is essential to the success of the scheme that the contributing workmen should be given suitable representation on the governing bodies concerned.

About six and a half million employees are contributing regularly to the Voluntary Hospitals, representing (with their wives and children) about fifteen million people. On June 25, 1934, there were ten million employed persons compulsorily enrolled under National Health Insurance in England, and as the Voluntary Hospital Contributory Funds mainly include persons insurable under the National Insurance Acts it will be seen that about two-thirds of the compulsorily insured population of the country are also entitled (with their dependents) to receive free Hospital maintenance as a right rather than be recipients of charity.

THE DEVELOPMENT OF VOLUNTARY SCHEMES

It was my privilege to be responsible for one of the earliest organized efforts to establish a Contributory Fund among employers and employees in Sheffield in the year 1921. Notwithstanding a decade of unprecedented industrial depression, 200,000 employees have been enrolled into a regular weekly Contributory Fund in that locality. A further experiment in the centralization of Hospital policy and Hospital finance was commenced under my direction in 1927 on Merseyside, which includes the City of Liverpool, the County Boroughs of Bootle, Birkenhead, and Wallasey, and their immediate environs, a total area of about 250 square miles. In 1933, the Merseyside Fund had enrolled over

*Courtesy of the American Hospital Association. Mr. Sydney Lamb has spent several weeks in the United States as the guest of the American Hospital Association and has addressed the annual convention in Philadelphia, September 27, 1934. This paper is drafted from the speech he made in Philadelphia before the American Hospital Association and talks in other cities in the United States.

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274,000 contributors. In some communities the contributors comprise almost the entire laboring population. For example, in Birmingham 460,000 contributors with their families are enrolled. The growth of the Hospital Saving Association of London deserves special record. Formed in 1923, the income of 1925 was $340,000 from 160,000 contributors. Ten years later the income rapidly grew almost tenfold to $3,200,000, with over one and a quarter million contributors. The Prince of Wales is patron of the London Association and the King's Physician is its vice-president. The Association prints a substantial monthly magazine as its house organ.

In the London organization some of the members join through their place of employment, but the majority, as in several other cities, are organized into groups. Each group has a "secretary" whose duty it is to stimulate interest, adjust minor difficulties and collect payments. The "group secretaries" serve voluntarily, and are especially active among contributors who do not contribute through their places of employment, but as individuals through their secretaries, who in turn pay the proceeds to the association.

Another type of adventure with special interest is illustrated by the London, Midland and Scottish Railway Employees' Hospital Fund created and conducted entirely by the interested and enthusiastic labors of Railway Directors and employees. Started in 1921 an annual income has been built up amounting to $877,800 from about 250,000 employees of this British Railway in the interests of Hospitals.

VALUE OF CONTRIBUTORY FUNDS TO VOLUNTARY HOSPITALS AND THE COMMUNITY

The estimated average amount paid by English Contributory Funds to the Voluntary Hospitals is about $10 a week, equal to about 70 per cent of the actual cost of maintenance. This does not, of course, reimburse the hospitals for their services. But when one considers that English workmen as a class paid considerably less than half the costs of services received before the contributing schemes were introduced, the voluntary hospitals may be regarded as profiting by the new plans. There is a growing consciousness that English Contributory Funds must accept an obligation of meeting the full cost of maintenance of contributors in Voluntary Hospitals. A few schemes have done so.

The Oxfordshire Contributory Scheme has always succeeded in making a payment to its Voluntary Hospitals of $17.50 per week per IN-Patient contributor hospitalized. The Wolverhampton Fund meets the entire costs of Hospital service to contributors and leaves a generous surplus toward the annual cost of treatment of its local sick poor.

THE USE OF GOVERNMENT HOSPITALS BY CONTRIBUTORS

The Management Committees of the large contributory Funds in England have catered to the needs of contributors by admitting them to publicly owned Hospitals. The Local Government Act of 1929, which came into operation in 1930, gave powers, for the first time, to Public Authorities in England to provide general Hospital treatment for the community. Prior to that date general Hospitals were owned by the Boards of Guardians under the Poor Law Acts. The admission of contributors to publicly owned hospitals was necessary in many of the large industrial areas, such as London, Birmingham, Merseyside, Sheffield, where the Voluntary Hospitals have been unable to provide the heavy capital costs of the additional general hospitals accommodation needed by the community.

Family doctors frequently arrange for the admission of contributors into publicly owned Hospitals for the treatment of acute illness. The Contributory Funds make arrangements with Public Authorities for their Contributors to be exempt from—(a) Investigation into their financial circumstances, and (b) Payment or charge of any kind.

Voluntary Hospitals owe a great debt to the Public Authorities for their ready and friendly coöperation in regard to the establishment and conduct of Contributory Funds. The payment asked by Public Authorities from Voluntary Hospital Contributory Funds toward the cost of maintenance of a contributor in a Public Hospital is approximately the same weekly amount which the average workman could afford to pay to public funds if no Voluntary Hospital Contributory Fund existed.

The persons eligible for participation in the contributory schemes for the most part are those who come within the national health insurance income limit. The official policy of the British hospital Contributory Schemes Association is that all persons within the national health insurance income limit should ultimately subscribe, and that the total amount of their subscriptions should be sufficient to meet the full cost of maintenance in a voluntary hospital. The full cost ultimately should include a reasonable payment for the services of a practitioner to treat these patients.

Two important groups are not now subscribing to the Contributory Schemes and are not really eligible for their benefits. The first is the well-to-do, a relatively small group of private patients who use private accommodations and who are willing and able to make payment from their private fees. The other group is the unemployed and sick poor whose financial circumstances are such that they are able to make little or no contribution when they are well or when they are ill. The costs of this group are

met by charitable subscriptions in voluntary hospitals and by taxation in public hospitals.

THE BRITISH HOSPITAL CONTRIBUTORY SCHEMES ASSOCIATION

There are approximately 150 contributory schemes in England, and nearly every voluntary hospital participates in the benefits of a contributory fund, either as a single institution with a limited number of subscribers, or as one of a group of hospitals serving an entire community. The larger funds hold membership in the British Hospital Contributory Schemes Association, which included about 130 schemes with about 6,000,000 contributors in 1934. At the Annual Conference in 1933 more than 100 representatives from 45 different schemes were in attendance.

The secretary to the association acts in an advisory capacity to the officers of local schemes, coördinates the activities of the various funds with the interests of other professional groups, accumulates statistics for comparative purposes, advises on the development of reciprocity between funds, and conducts a clearing house for the exchange of information.

ATTITUDE OF THE BRITISH MEDICAL ASSOCIATION

The contributory schemes have been developed for payments to hospitals, and consequently they have not directly affected the private practice of physicians. However, the British Medical Association has taken an active interest in administration of the plans, and has coöperated actively in maintaining a high standard of professional services for contributors who previously had sought their hospital and medical care as recipients of charity.

The value of the insurance principle in the payment of hospital bills has been officially endorsed by the British Medical Association. As the original contributory schemes have come nearer to paying the full costs of medical care, the doctors have asked, and rightly so, that a portion of the contributors' funds be used for the reimbursement of attending physicians and surgeons.

At the 1933 annual meeting of the British Hospital Contributory Schemes Association two official representatives of the British Medical Association participated in the program and advocated extension of the contributory scheme to the middle classes. Dr. Peter McDonald, chairman of the Hospital Committee of the British Medical Association, said among other things at that time:

"My association has had it brought home that serious illness, especially illness involving attention in nursing homes or in pay beds at hospitals, imposes a breaking strain on persons of moderate incomes.

"It is at present exploring the possibilities of the establishment of Provident Schemes, or of the extension of the relatively few and small existing Provident Schemes, whose object, or chief object, will be to pay for persons who have to go as in-patients to pay beds at hospitals or to nursing homes. . . . This has not yet been made a part of the policy of my association, but . . . I have great hopes—indeed, confident hopes, —that the sort of thing I am indicating will at an early date meet with the approval of my association and with that of the surgeons and other practitioners concerned."

At the annual meeting of the British Medical Association, July, 1934, the profession decided to approve a model hospital scheme adaptable to any area for the provision of hospital services on a contributory Fund principle for persons of moderate means. This recently approved contributory fund includes married men with incomes of £500 or $2,500 per year and unmarried men with incomes of £350 or $1750 a year. The fund makes payments on behalf of each patient for nursing and maintenance of $25 per week for a maximum of three weeks and a payment to the physician or surgeon averaging $80 for each case. These are inclusive charges, no further fee is payable by the contributor or by the fund.

INCOME LIMITATIONS UPON SUBSCRIBERS TO CONTRIBUTORY SCHEMES

As previously stated, most of the Contributory Schemes have not been financially self-supporting; consequently, there has been a tendency to limit the benefits to people of small incomes. The contributors receive free care from the attending staffs of the hospitals, although procedures are in effect in some places by which members of the hospital staff are paid from the contributing funds. The British Medical Association has for many years urged that only persons within certain income limits should be entitled to the free hospital privileges of organized contributory funds.

A few of the older contributory funds have not established income limits, but the larger and more recently established funds, notably the Hospital Savings Association of London, and the Merseyside Contributory Fund, have adopted the limits of income urged by the British Medical Association, which are essentially as follows:

Unmarried persons without dependents, £4 or $20.00 a week.

Married couples without dependents, £5 or $25.00 a week.

Married with a dependent, £6 or $30.00 a week.

The regulations of the Merseyside Fund require that a contributor must bring an explanatory note from his family doctor except in cases

of casualties and emergencies. The British National Health Insurance provides for the services of general practitioners, but does not cover specialists' services or institutional care for insured persons. Nor does the national plan provide any services whether for dependents or insured persons. Consequently many voluntary hospitals provide much medical and surgical service to the families of the lower paid wage-earners who for economic reasons may be prevented from purchasing such services from a medical practitioner. A certain number of dependents of contributors apply for general medical services at the out-patient departments of the participating hospitals in the contributory schemes. This fact gave rise to the requirement of the certificate from the family doctor.

A dependent is defined by the Merseyside Hospitals Council Contributory Fund as a "relative resident with and wholly dependent upon the earnings of the contributor".

RATES OF CONTRIBUTIONS AND HOSPITAL BENEFITS

Weekly contributions vary from one community to another. Some of them are organized on a uniform basis, some of them as a proportion of the wage system. Where they are established on a uniform basis, the usual arrangement is 3d. per week, with the possibility of an additional penny a week paid by the employer himself. The rate of 3 pence is applied in Birmingham, in London, and for the railway system previously described. In Oxford the contributory scheme is at the rate of 4 pence per week. In Sheffield and in the Merseyside Hospital Council the plan of one "penny in the pound" is used, with an additional penny a week from the employer.

Contributors are entitled to hospital benefits when they present a hospital "voucher" placed in their hands by their employer, or a "group secretary". Admission may be obtained only on recommendation of a practicing physician, but without the possession of the "voucher" a subscriber is not eligible to the *free* services of the plan. The benefits received by contributors are as follows:

1. In-patient service.
2. Out-patient service, except that more than one call may not be made without special recommendation of the attending physician or family doctor.
3. Convalescent and after-care.
4. Special treatment for rheumatism and like diseases.
5. Extra nourishment (eggs, milk, butter, etc.) for a period of six weeks.
6. Surgical appliances.
7. Assistance to mothers in times of acute illness. The council will look after the home while the mother is away or will place children under suitable care.
8. Financial assistance and clothing.
9. Home visits by home visitors.
10. Motor transport by voluntary car owners during the night hours for relatives of dying patients and for blood donors.
11. Ambulance service.
12. Home nursing on the recommendation of a practicing physician.

The contributory funds themselves accept no responsibility for certification for admission. The decision as to whether there should be immediate admission to a voluntary participating hospital is in the hands of the family doctor and the hospital doctor.

The English Contributory Schemes accept the responsibility of payment only for such cases as would be medically eligible for admission to a voluntary general hospital. Through public funds and through state and municipal hospitals, the government has accepted the responsibility for certain other types of chronic and long-stay illnesses. For this reason there are excluded from the British Contributory Schemes treatment of such sick conditions as tuberculosis, mental disease, infectious disease, senility and chronic and incurable diseases, illnesses dealt with by school clinics—such as treatment for tonsils and adenoids, ringworm, and eye testing.

ORGANIZATION OF HOSPITAL CONTRIBUTORY FUNDS

The contributory schemes are usually organized on a community basis, as civic movements under the sponsorship of many important agencies. A "council" guides the activities of collecting funds from subscribers and making payments to the participating hospitals. Usually there is free choice, not only among participating institutions, but voluntary hospitals everywhere.

An illustration of the agencies represented in the administration and control of a contributory scheme may be taken from that of the Merseyside Hospitals Council which contains representatives from the following groups: hospital management boards, hospital medical staffs, employers, organized labor, churches, universities, municipal hospitals, and other agencies. The administration of the Council controlling the contributory fund is carried on by a group of committees, each one under the supervision of the executive secretary of the Council who is a full-time employee. These committees include those for general purposes, finance, hospital organization, ambulance, distribution, extension and publicity, convalescent and after-care, hospital Sunday appeals committee. The Council's administrative staff is made up of a group of de-

partments, each with its own appropriate clerical staff for secretarial work, accounting, ambulance transport, publicity, and convalescent and after-care, etc.

When collections of funds are made through payroll deductions, the employer of labor participates greatly in making the plan a success. The activities of the labor employer in connection with a fund include the following: (1) giving facilities to the Council's staff to meet and address employees; (2) collecting employees' contributions at the rate of a penny in each pound (or some agreed amount) of their earnings through the wage offices; (3) making an annual subscription (in over 90 per cent of the firms) equal to one-third of the total contribution; (4) sending the contributions at regular intervals to the central fund; and (5) issuing free hospital vouchers for in-patient and out-patient service to contributing employees and their bona fide dependents.

In Liverpool, the original contribution of one penny in the pound has not been sufficient to cover the whole cost, due to the low rate of contribution.

METHODS OF COLLECTING

The most productive and economical plan of collecting hospital contributions has been to ask the employer to collect them from the wages or salaries of the employees. Under any alternative scheme of collection it is unlikely that as many persons would be enrolled, although in non-industrial communities astonishingly large numbers of contributors have joined "groups" and made their contributions through group secretaries.

Arrangements have been made in most of the contributory schemes to take care of unattached contributors who cannot contribute through employers, such as domestic servants, individual craftsmen, assistants in suburban shops, and state pensioners. These individual contributors are asked to pay a larger rate because of the absence of the employer's contribution. They are also required to wait some months before they are entitled to any of the free hospital privileges. The first provision reduces the overhead costs of taking care of a large number of contributions. The second avoids the difficulty of adverse selection from individual subscribers who might expect to receive hospital care shortly after their enrollment.

Usually no person employed in an establishment of ten employees or more is allowed to become an individual unattached contributor. In such cases, the employer is persuaded if possible to operate the fund officially from the place of employment.

There is a careful selection of approved, well-conducted shops which act as receiving depots for contributions from unattached contributors. There are 480 of these receiving depots in Liverpool and the Merseyside district which receive payments from 40,000 individual contributors as a voluntary service without payment of any kind. Each shop is given a six weeks' supply of stamps and each contributor is supplied with a separate contribution card. When he makes his weekly or monthly contribution to the depot, he receives stamps which are affixed to his card.

SUGGESTED CHANGES IN THE EXISTING PROCEDURES

There is some question as to whether it is desirable to include out-patient service in the benefits of the hospital contributory scheme. Likewise the question may be raised whether it is appropriate to include maternity care in a contributory plan of this kind. At the present time in England every employed woman, and the wife of every employed man, can secure a grant of two guineas from the National Health Insurance fund for the costs of childbirth which partly meets the cost for the average wage-earner for maternity care in English hospitals.

Certain problems remain in the plan. One is the financial payment of hospital medical staffs. This is gradually being solved by the raising of contributions, and the establishment of Provident Schemes for the middle classes. Another is the coördination of hospital services among the various institutions in the community, not only voluntary but publicly supported municipal institutions. Such coördination requires both tact and administrative ability. Reciprocity between different contributory funds is becoming the rule rather than the exception.

SUMMARY AND CONCLUSIONS

There are at the present time in Great Britain over six and one-half million subscribers to British Hospital Contributory Schemes who with their dependents comprise approximately 40 million individuals, assured of hospital care in case of necessity without additional cost to themselves.

Up to 1920, workmen or people of limited means and their families were accustomed to receive hospital care in public hospitals or in private voluntary hospitals and were expected, if possible, to make some voluntary contribution at the time of their discharge after receiving hospital care. It was customary also for individual hospitals to make drives for funds through small contributions from larger numbers of people as well as large contributions from the well-to-do. Consequently, it was decided to make a systematic canvass of the employees of each community, asking them to make regular contributions and guaranteeing them in return hospital care if necessary without special financial investigation.

It was not originally intended that the sub-

scriptions from the workmen and people of limited means would suffice to cover the costs of hospital care that they would receive. It was felt, however, that the contributions received in this way would be much greater in total than the meagre voluntary contributions made by these people at times of hospital illness. The British Hospital Contributory Schemes were not primarily "insurance plans" for distributing the cost of medical care among people accustomed to paying hospital bills at the time of their sickness.

Large numbers of employed persons are unable to meet any or more than a fraction of the cost of hospital care at the time of an acute illness. The experience of the schemes indicates clearly that these same persons can contribute to a plan of "group budgeting" a substantial share of the costs received by those in the groups requiring hospital care.

The hospital contributory schemes are officially and enthusiastically endorsed by the British Medical Association, which also recommends that self-supporting plans for the "middle-classes" be adopted throughout the country.

THE RED CROSS REACHES INTO MILLIONS OF HOMES

The Red Cross—as a symbol of service or a symbol of mercy—touches the lives of millions of Americans.

In five years of economic depression and partial recovery Red Cross has given direct relief to one out of every five persons in the United States. These were victims of unemployment, drought, tornado, flood, earthquake and other catastrophes.

An average of 100 disasters each year call for Red Cross aid to thousands of sufferers, who are given food, clothing, shelter, medical aid and help in regaining self-support.

More than a million men and women, boys and girls, wear the insignia of Red Cross Life Saving or First Aid. These safety services were taught this year to 70,000 men employed on federal relief projects and to key men in every Civilian Conservation Camp.

Each year a quarter million disabled ex-service men and dependents, and men in the regular Army, Navy and Marine Corps and their families receive the friendly assistance of the Red Cross worker.

Red Cross public health nurses visit the sick in city and rural homes. They have aided at the birth of more than 19,000 babies during the depression years and also made 1,289,000 visits to or in behalf of more than 100,000 maternity cases. Thousands of children reached by these nurses have had conditions of malnutrition discovered and checked.

In homes and in institutions the blind are furnished with Braille literature through the skill of Red Cross Braille workers who print thousands of these books.

Almost 7,000,000 school boys and girls, members of Junior Red Cross, wear buttons with the motto "I Serve."

To carry on this humanitarian work more than 100,000 men and women volunteer their services through the 3,700 Chapters and 10,000 Red Cross branches which cover the nation.

Four million men and women join the Red Cross as members every year. Their membership dues furnish the funds for Red Cross work.

BOGUS "WARM SPRINGS CRYSTALS" RUN AFOUL FOOD AND DRUGS ACT

One man has been sentenced to a year in a Federal penitentiary and two others are awaiting trial on a charge of conspiring to violate the Federal Food and Drugs Act by advertising and selling "Warm Springs Crystal Compound" as coming from the springs by that name in Georgia, when as a matter of fact the "crystals" did not come from that source and were only a simple laxative, composed of Glauber's salts, similar in action to Epsom salts. The "crystals" cost only a few cents a pound and sold for a dollar a pound.

In their literature, their correspondence with agents, and especially in conversation with customers, the Warm Springs Crystal Company sought to use to commercial advantage the name Warm Springs. Salesmen were urged to point out the beneficial effects of the springs. The company and its "crystals" were disavowed in the beginning by the Warm Springs Foundation as having no connection with the springs other than that the office was set up in the same town.

When the "crystals" began to move into interstate commerce, members of the company were arrested and indicted by a grand jury. Quantities of the compound were seized at the instance of the Food and Drug Administration because of misbranding under the Food and Drugs Act. Seizures were made at El Paso, Oklahoma City, Los Angeles, San Francisco, Louisville and Paducah, Ky.; Cincinnati, and Shreveport, La.

Members of the company were W. C. Dunham, Macon, Ga., who entered a plea of guilty and was sentenced to a year in the penitentiary; Curtis J. Hazelrig, Atlanta, at liberty under bond and Mallory H. Taylor, Jr., Macon, in jail at that place because of inability to make bond.—*Bulletin, U. S. Dept. of Agriculture.*

CASE RECORDS
of the
MASSACHUSETTS GENERAL HOSPITAL

ANTE MORTEM AND POST MORTEM RECORDS AS USED IN WEEKLY CLINICAL-PATHOLOGIC EXERCISES

EDITED BY RICHARD C. CABOT, M.D.

CASE 20441

An eighteen-year old Jewish male college student entered complaining of chills, fever and stupor of one week's duration.

The patient had always been very healthy and about six months before entry had satisfactorily passed an examination for life insurance. Ten days before admission he drank some water from a well at camp. Several other people had drunk this water and were all apparently well. The following evening he went to a dance but felt indisposed. He felt chilly on the way home that evening but had no definite shaking chill. Later that evening he vomited. He slept continuously for thirty-three hours, and when he awoke felt quite well. He refused his supper that day, remained in bed, and had a definite shaking chill followed by a drenching sweat. He felt better the next morning but remained in bed. A physician made a diagnosis of malaria and treated him with quinine. During the five days before entry he had a low morning and a high evening temperature. The fever continued and his physician suspected typhoid fever. A Widal test was negative. He subsequently developed headache.

His family and past histories are non-contributory.

Physical examination showed a well-developed and healthy appearing young man sitting up in bed with his arms behind him, holding his back straight. The alae nasi were active. His neck was stiff; his skin moist and hot. In the left fundus was a hemorrhage in the course of an artery. There was a petechial hemorrhage in the right lower eyelid. The pharynx was red. The lungs were clear. The heart was of normal size. There was a blowing soft systolic and diastolic murmur at the base, especially at the left first interspace. A third sound was heard at the apex. The spleen was not felt. The knee jerks were sluggish. There was no Kernig.

The temperature was 104.8°, the pulse 108. The respirations were 25.

Examination of the urine was negative. Examination of the blood showed a red cell count of 4,480,000, with a hemoglobin of 80 per cent, and a white cell count of 24,400 with 93 per cent polymorphonuclears. A lumbar puncture showed slightly turbid ground glass fluid without any clot. The dynamics were normal. The aluminum sulphate and alcohol tests were slightly positive. The total protein was 50 milligrams, sugar 81 milligrams. The gold sol was 4433321100. There were 1410 white blood cells, 96 per cent of which were polymorphonuclears. There were 1270 red blood cells. A gram stain showed numerous gram positive diplococci. A culture, however, showed no growth. A blood culture showed streptococcus viridans. A throat culture was negative for streptococcus hemolyticus and meningococcus. A Hinton test was negative.

He continued to run a very high temperature, reaching as high as 106.2° and rarely below 104°. His pulse ranged between 110 and 130 and his respirations were between 25 and 30. He was given antimeningococcus serum intraspinally on the day of admission before cultures were reported. On the third day the index finger of the left hand was tender and the tip of the middle finger of the right hand showed purplish minute spots. The left conjunctiva showed a fine petechial hemorrhage. The spleen was not felt. The following day the aortic diastolic murmur was less marked. A neurological consultant upon examination found stiff neck and pupils that were slightly smaller than normal but equal. There was no strabismus or ptosis. There was a coarse, slow nystagmus to the right, left and up. The knee jerks and ankle jerks were a little more active on the right. The abdominal reflexes were absent on the right and only slightly active on the other side. The plantars pointed downward. He rapidly failed and died on the fifth day.

DIFFERENTIAL DIAGNOSIS

DR. GERALD BLAKE: "Six months before entry the patient satisfactorily passed an examination for life insurance." The significance of that statement is that there were no heart murmurs heard at that time.

In adults as well as children severe infections are sometimes ushered in by vomiting rather than chills. This patient appeared to be such a case.

A long sleep of thirty-three hours followed by vomiting suggests involvement of the brain or meninges; or a very marked degree of toxemia. I think this sequence of events suggests malaria enough to make the obvious therapeutic test of quinine worth doing.

In the absence of any definite signs, malaria, or poliomyelitis, or septicemia would appear to be the most likely diagnosis at the early stage; but the persistence of the fever following the use of quinine and the continued absence of definite physical signs would naturally make one consider typhoid, and the other infections causing prolonged fevers have to be borne in mind. The negative Widal test at the end of nine days is not completely satisfactory in ruling out

typhoid, but typhoid can be ruled out by the other symptoms that were found in the next twenty-four hours.

I think it should be noted that the headache did not appear until more than nine days following the onset of the illness.

The temperature and the white count with ninety-three per cent polymorphonuclears on admission verify the impression that he had a severe infectious process. Neither malaria nor typhoid should be further considered.

Before grouping the signs and symptoms at entrance, I would emphasize the stiffness of the neck and holding the back straight as pointing to meningitis or poliomyelitis. The alae nasi were active, indicating an effort to help respiration and the respiratory rate was 25, although the lungs were clear. Here is a definite suggestion of impairment of the function of the diaphragm and again makes one think of poliomyelitis. The pharynx was red; a common finding in poliomyelitis, but also too common in other diseases to be of much diagnostic significance. We must therefore seriously consider poliomyelitis as a possible diagnosis at entrance. However, the lack of evidence of further embarrassment of the respiration and further paralysis, and the other later findings, make it unnecessary to retain poliomyelitis as a diagnosis in this case.

The signs and laboratory findings while in the hospital divide themselves into two groups, one the central nervous system and the other the heart and circulation. We find stiffness of the neck, pain in the spine, active alae nasi, in a patient with no pathology in the lungs, sluggish knee-jerks, and changes in some of the other reflexes. The spinal fluid was turbid, and showed 1400 white cells, 96 per cent polymorphonuclears, 1270 red cells, increased total protein, a slightly high sugar, and a luetic type of goldsol. Such a fluid is possible in luetic meningitis, in poliomyelitis, possibly, with a brain abscess, and with meningitis due to other organisms than the tubercle bacillus. It is not typical of any one type. The lack of evidence of intracranial pressure is against abscess except in the anterior or posterior fossae. The goldsol could be found in other conditions as well as lues. The blood Hinton is negative. The changes in the reflexes show no more than might be expected from either meningitis or poliomyelitis. It is surprising that the dynamics were normal in the presence of such a fluid. I should expect increased pressure and I should also expect a positive Kernig. From these findings alone one cannot rule out a non-tuberculous meningitis or poliomyelitis.

There is still the possibility of brain abscess. A gram-positive diplococcus might be pneumococcus or streptococcus viridans.

Turning to the heart and circulatory system, we find a blowing systolic and diastolic at the base which had not been heard six months before, hemorrhage in the left fundus, in the right lower eyelid, later in the left conjunctiva, right middle finger and left index finger, and still later a diminution of the diastolic murmur, and a positive blood culture of streptococcus viridans. The spleen might have been enlarged, but it is not; this is mentioned twice. This is a satisfactory picture of bacterial endocarditis, either acute or subacute, with emboli diffusely distributed from the aortic valve. A streptococcus meningitis resulting from the blood stream infection is the most reasonable explanation of the symptoms in the central nervous system in this case. I would therefore make the diagnosis of bacterial endocarditis, streptococcus viridans, with multiple emboli, and streptococcus meningitis.

DR. TRACY B. MALLORY: Dr. Richardson, you saw this patient in the ward.

DR. WYMAN RICHARDSON: I was fortunate in seeing this patient with Dr. Holbrook in the emergency ward when he came in. It was a very interesting problem at that time. I thought he had a septicemia. I thought he might have something in his lungs at the time and I was inclined to discount the aortic murmur. I did a very careful physical and found nothing. Dr. Holbrook pointed out the lesion in the ocular fundus to me. He made the definite diagnosis at the time of bacterial endocarditis. Later on when the emboli appeared the diagnosis became more evident.

DR. MALLORY: Have you any suggestions, Dr. Means?

DR. MEANS: I was interested because the East Medical Service recently showed at the medical staff conference a case that had striking similarities to this one. The patient came in with a picture of meningitis and turned out to have bacterial endocarditis.

DR. A. A. HOLBROOK: The patient of whom Dr. Means speaks came in three weeks ago with evidence of an established meningitis. His illness had begun two weeks before with pains in the knees and ankles, fever and sweating. There was a past history of rheumatic fever fourteen years before. The heart showed a loud blowing aortic diastolic murmur and the blood pressure was 140/60. Lumbar puncture showed an elevated cell count. A streptococcus viridans was recovered from both the spinal fluid and the blood stream.

DR. MALLORY: It is evident that this patient also shows a combination of bacterial endocarditis and meningitis. However the previous history of rheumatic fever and the long duration of the meningitis over three weeks with the patient still alive is more like the usual course of viridans infections rather than the fulminating course which to-day's patient presented.

Clinical Diagnosis

Acute bacterial endocarditis.

Dr. Blake's Diagnoses

Bacterial endocarditis, streptococcus viridans.
Streptococcus meningitis.

Anatomic Diagnosis

Acute bacterial endocarditis, streptococcus viridans.

Pathologic Discussion

Dr. Mallory: The autopsy was unfortunately limited to examination of the heart. This case was distinctly unusual in some of the pathologic findings. The diagnosis of acute bacterial endocarditis is undoubtedly correct. We found large vegetations on both the aortic and the mitral valves. On the other hand it is unusual to have an acute endocarditis with a streptococcus viridans, which usually produces the subacute type of lesion. There is absolutely no trace on either of the two involved valves of a previous rheumatic lesion such as one almost invariably finds in viridans infections of the valves. Also with the viridans infection one very rarely gets metastatic sepsis. Various embolic manifestations, even emboli in the spleen and kidney large enough to produce infarcts, are of course almost the rule, and yet they very seldom break down to form abscesses; and meningitis is a very unusual complication. The organism in this case behaved like an extremely virulent one and yet in life, in the blood and the spinal fluid, and, after death, from the heart we were never able to culture anything but a typical streptococcus viridans. The story and pathologic findings would be much more consistent with a hemolytic streptococcus, a pneumococcus or a staphylococcus.

CASE 20442

Presentation of Case

An Italian widow fifty-three years old entered complaining of difficulty in walking of three months' duration. Most of the detail of the history was given by her son and daughter.

Her first symptom, stomach pain, began more than two years before admission. Two years before entry she had numbness on the lateral aspects of the heels. About the same time her ankles were swollen in the evening. Both symptoms disappeared after six weeks. She was then well until five months before entry, when her acute illness began with nervousness, weakness and moderate pain in both calves. She went to bed. During this time she had pus in her urine for a month. This cleared, and she felt well and walked about for two weeks. Three months and a half before entry the pyuria recurred and she felt weak and went to bed again. Then the urine was clear for a few weeks. Beginning two months before entry she spent a month in a hospital. A diagnosis of pyelonephrosis, psychoneurosis and oral sepsis was made. The blood showed secondary anemia. The non-protein nitrogen was 20. One month before entry she could not sit up alone. A week later she had fever, slight dry irritative cough and a recurrence of pyuria. Following this she could not move her legs. She had had occasional numbness and tingling of the fingers. Recently she had had great pain in the pelvis on urination, disappearing on passing large amounts of urine. For two weeks she had been incontinent of urine and feces. A week before entry her rectum was impacted. This was relieved. She had had a recent weight loss of thirty or forty pounds.

The family history and past history were negative. She had always been well and had had no dyspnea on going up three flights of stairs six months before entry.

Physical examination showed a fairly well-nourished woman lying comfortably in bed. The skin was dark, with a yellowish pallor. There was an atrophic scar two centimeters in diameter on the right arm and a vesicle one centimeter in diameter surrounded by an inflammatory reaction on the dorsum of the right foot. On the left forearm was a subcutaneous nodule, smooth and attached to the underlying tissues. The spine was flexible; she could not sit alone. The apex impulse of the heart was not seen or felt. There was no enlargement to percussion. The action was regular. The sounds were of fair quality, the pulses normal. The blood pressure was 95/65 to 90/60. The liver was enlarged three fingerbreadths in the anterior axillary line and slightly tender. The edge was felt. The tip of the spleen was felt on inspiration. The anal sphincter was lax and toneless. There were poor urinary control and occasional incontinence. Pelvic examination showed rectocele and a lacerated cervix. The pupils were normal. The reflexes were absent or markedly diminished below the shoulder girdle. There was bilateral Babinski.

Neurological examination showed the cranial nerves negative. There was weakness of the trunk muscles below the shoulder girdle and flaccid paralysis of the legs, which showed diminished postural sense, vibration sense and sensation to pin prick.

The urine was normal in amount, specific gravity 1.012 to 1.020; there was a slight trace to the slightest possible trace of albumin at all of four examinations. The sediment showed one to eight white blood cells at three of four examinations (no catheter specimen) and one or

two red cells once; no casts. Blood examination showed 7,300 to 18,400 white cells, 73 per cent polymorphonuclears, 2,540,000 reds, hemoglobin 70 per cent. The smear showed no achromia, many small and large cells, some dumb-bell and pointed shapes, platelets normal. Two later smears showed 3.8 to 4.5 per cent reticulocytes. The red blood cell volume index was 1.01. A Hinton test on the blood was negative. The non-protein nitrogen was 27. The icteric index was 5. A van den Bergh was normal, indirect. A lumbar puncture at entrance gave 12 cubic centimeters of clear colorless fluid at an initial pressure of 80, final pressure 0. The hydrodynamics were normal. The total protein was 37, the colloidal gold 0001110000, sugar 43.5. Wassermann, alcohol and ammonium sulphate were negative. On gastric analysis the fasting contents of the stomach were 15 cubic centimeters of cloudy yellow fluid, free acid zero, total acid two. Test meals at half an hour and an hour each showed fluid of the same color, free acid zero, total acidity 3. Guaiac and microscopic examinations were negative on all three specimens.

The temperature was 98.7° to 102.7° with a rise to 107° the day before death. The pulse was 87 to 151, the respiration 20 to 51.

X-ray examination showed slight curvature of the spine to the right in the middorsal region, a small area in the fifth to sixth dorsal interspace having the density of calcification, and spur formation in the dorsal and lumbar spine consistent with hypertrophic arthritis. A flat plate of the abdomen showed a large amount of gas in the bowel, some apparently in the small bowel. The outline of the left kidney was obscured by gas. The chest showed diaphragmatic motion on both sides; no gross lesions, but the film was underexposed. At a second chest examination the diaphragm was a little high on both sides, the aorta somewhat tortuous; no evidence of disease in the chest. At a third examination there was no definite change, though interpretation was not reliable owing to respiratory motion. The diaphragm moved well. The examination was essentially negative.

On the sixth day a urological consultant reported that there was some cystitis as a result of the inlying catheter. He found a palpable mass in the right upper quadrant, but thought that before doing a cystoscopy to rule out the right kidney as a possible source of infection they should wait until the patient was in better condition.

Beginning the third day the patient ran a fever of about 102°, with rapid shallow respirations. On the fifth day she began to show large transient urticarial wheals, apparently without symptoms. On the seventh day there was some dullness along the medial border of the right scapula and there were a few sticky râles in the lower portion of the right axilla. The temperature rose to 105°, the pulse to 140 and the respiratory rate to 51. A medical consultant found only suppressed breathing over the right lung. X-ray examination was negative. The following day the patient was extremely ill, with a temperature of 107°, pulse 140, respirations falling, and cyanosis in spite of an oxygen tent. There was increased dullness over the two lower lobes, with distant breath sounds and numerous medium moist râles. Over the left side the resonance was better than on the right and the breath sounds were much clearer. That night the respirations were still slower and more shallow. The pulse was rapid and of poor quality. The following morning, nine days after entry, the patient died.

Differential Diagnosis

Dr. Maurice Fremont-Smith: The initial complaint makes us think of something interfering with the posterior tracts. When people complain of difficulty in walking we should first think of some condition causing ataxia, such as tabes or combined system disease, possibly multiple sclerosis. However, pain in the stomach proves actually to have been the first symptom. First symptoms are very important. When we see patients it is well to try to carry them back to the beginning and say, "Before that did you notice anything else wrong?" and sometimes a symptom that happened ten years before may give you a clue. I am thinking of multiple sclerosis, in which a patient may tell you he had double vision years before, and thus give the clue that makes diagnosis possible. Here we have stomach pain. How could that fit in with the chief complaint, her difficulty in walking? It is possibly consistent with tabes, but to have stomach pain as the first symptom of tabes would be unusual. This symptom comes most often during the course of the established disease.

How about combined system disease? In pernicious anemia gastric symptoms are not uncommon,—anorexia, gas, discomfort in the abdomen and sometimes pain. Sometimes epigastric pain in pernicious anemia may be an outstanding symptom, although usually it is described as not being very severe. Nevertheless it is possible that we are dealing here with pernicious anemia and combined system disease.

Numbness in the lateral aspects of the heels would go with a lesion interfering with the posterior tracts. Most of the tactile sensory paths go up through the posterior columns, and there are also some superficial sensory tracts which go up not in the posterior columns but in the lateral portion of the cord, together with the sensations of pain and temperature. Consequently in pure posterior tract involvement we

usually have the deep muscle and vibratory sensations interfered with, but do not have much change in tactile sensation. A tabetic would have absent toe position and vibratory sense and ataxia, yet if you touch the skin on the foot you do not find anesthesia. You do find, perhaps, a diminution. In other words most of the tactile sensory paths do not go up in the posterior cord. Most of them run up to the thalamus in that portion near the central canal where pain and temperature go. But some of them do go up in the posterior tract, and consequently in the tabetic we do find some loss of skin sensation. In a tabetic with marked ataxia you will find some diminution to prick along the ulnar sides of the arms. This symptom of hypesthesia of the heels can, then, be consistent with posterior tract involvement. We may have to find something more than posterior tract involvement to account for it. It does not rule out tabes or combined system disease.

"A diagnosis of pyelonephrosis, psychoneurosis and oral sepsis was made," none of them, excepting possibly the psychoneurosis, being capable of explaining her symptoms. A very important point which bears on this, but which we cannot use here is: be very careful about making the diagnosis of psychoneurosis in a patient over forty who has not shown symptoms of neurasthenia before. The point is, if a patient is going to have neurotic symptoms at fifty he almost always has shown symptoms of that type before. We do not know that this patient has not, because the record is not complete, but it is an unsafe diagnosis to make.

Numbness and tingling of the fingers is a very important sign in combined system disease. Of course it may occur in other conditions too, but usually when it is bilateral it is much more likely to be pernicious anemia and combined system disease than for instance a cord tumor, which is usually unilateral, at least at first. It may be multiple sclerosis still.

The pyuria can now be brought into the picture. Both combined system disease and tabes frequently affect the urinary bladder. If the bladder cannot be emptied completely because of obstruction or because of a nerve condition, and if the bladder contains residual urine, infection is very likely. Consequently this whole picture of urinary infection may be simply a part of a central nervous system condition.

She was an Italian widow, therefore dark skin has not the same significance as if she had been a blonde, in which case we should think of Addison's disease and the various other diseases which cause pigmentation, but I think under these conditions it is of little significance, the yellowish pallor being part of a dark skin plus anemia.

"On the left forearm was a subcutaneous nodule, smooth and attached to the underlying tissues." That brings up another possibility, although I do not see how it could give such a general distribution of symptoms. What am I thinking of?

A STUDENT: Neoplasm, neurofibromata.

DR. FREMONT-SMITH: Yes, von Recklinghausen's disease. I do not see how neurofibromata can explain this. We have to assume a great many all over, bilaterally arranged, because they come from the fibrous tissue in a nerve sheath. It is typically a peripheral nervous phenomenon. Thus, to explain the numbness of both hands and heels and the difficulty in walking we should have to assume four lesions outside the central nervous system, which seems very unlikely. So we do not know what that subcutaneous nodule may be.

The blood pressure is just in the region where we begin to wonder about Addison's disease, and yet we find many people who come in with a blood pressure of 90 to 95. This woman has not been walking much, and all we can say is that she has a low blood pressure. I do not think it is characteristic even when taken in connection with the dark skin.

"The liver was enlarged . . . and slightly tender." That is a hard finding to explain. The only time that the liver is tender is when there is an increasing stretching of the capsule. We get it during periods of decompensation. We do not get it when the liver is in a stabilized condition, not for instance in cirrhosis. We might have an abscess of the liver that would cause tenderness. Decompensation is not likely, particularly as the heart was apparently normal and she has not had dyspnea and was able to walk up three flights of stairs. The tip of the spleen and the enlarged liver would all go with cirrhosis. In differentiating cirrhosis and cancer, that is one of the signs that helps. If you have cancer of the liver you will usually not be able to feel the tip of the spleen. If you find the spleen you feel that there is probably an interference with the blood's getting through the liver,—that is to say cirrhosis as against cancer, for cancer is usually in one or two or three or twenty lumps, and the rest of the venous spaces take the blood through the liver perfectly well; there is no obstruction.

"The reflexes were absent or markedly diminished below the shoulder girdle. There was bilateral Babinski." What do you say to those two things? What does that mean?

A STUDENT: Neurofibroma?

DR. FREMONT-SMITH: No. Why couldn't it be neurofibroma? Neurofibroma is on the peripheral nerve. If you have a lesion of the peripheral nerve you may get absent reflexes and atrophy, and you may get paralysis. You may, if it is on the combined nerve, get sensory changes too. It is like a neuritis. But how can you get a positive Babinski? What does a positive Babinski always mean?

A STUDENT: Disease of the corticospinal tract.

DR. FREMONT-SMITH: You cannot get it from a peripheral nerve injury; only when the inhibitory influence of the cortex is cut off. It must be a pyramidal tract lesion. It may be up in the internal capsule or it may be in the cord as you get it in combined system disease, or multiple sclerosis. A Babinski is one of the few things you can be categorical about. It always means pyramidal tract involvement, and the reflexes are apt to be exaggerated. Here we have absent reflexes. How are you going to put those two things together?

A STUDENT: Multiple sclerosis?

DR. FREMONT-SMITH: If Babinski reflexes mean pyramidal tract involvement, and if pyramidal tract involvement would normally give exaggerated reflexes, and here we have absent reflexes, how are you going to explain that?

A STUDENT: As interference in the reflex arc.

DR. FREMONT-SMITH: Yes, I think that is perfectly fair. Where is your break apt to be under these conditions?

A STUDENT: In the posterior tract?

DR. FREMONT-SMITH: That is the point. In combined system disease you have the motor tracts involved, giving a positive Babinski, and at the same time involvement of the afferent posterior tracts. As we know, the reflex arc does not enter and leave the cord at the same level. The impulses pass into the cord, run up a certain distance before reaching the motor nerve cell. If you assume that you have both a motor and a sensory tract involvement, combined system disease, you can have those two things,—no reflexes and a positive Babinski. Multiple sclerosis might give such signs, and I suppose that syringomyelia might press in such a way as that; but then I think we should have the typical disassociation between touch and pain and temperature.

I do not understand the flaccid paralysis. A real flaccid paralysis means that the motor horn cells are involved. Neither tabes nor pernicious anemia involves the anterior horn cells, and amyotrophic lateral sclerosis gives no sensory changes. Here all types of sensation are diminished.

"Blood examination showed 7,300 to 18,400 white cells, 73 per cent polymorphonuclears, 2,540,000 reds, hemoglobin 70 per cent." There is an important point that immediately makes us think whether we are dealing with pernicious anemia and combined system disease, and that also would explain best most of the neurological findings. "No achromia" would be extraordinary with two and a half million reds except in pernicious anemia. "Platelets normal" is an interesting observation about which one wonders. "Two later smears showed 3.8 to 4.5 per cent reticulocytes." She probably was given some liver, but the counts should have gone even higher than that. We get .8 to 1 per cent of reticulocytes in normal blood. The red blood cell volume index was not very much increased.

Sugar 43.5 in the spinal fluid is normal, i.e., about half of the normal blood sugar. The total protein is a little high, but we do find it that high sometimes in otherwise normal spinal fluid. "Pressure 80 and dynamics normal." Certainly there is no evidence of block to suggest a cord tumor.

A STUDENT: Didn't she have some kidney involvement?

DR. FREMONT-SMITH: In the sense of kidney infection, not in the sense of nephritis. You certainly would not get a high spinal fluid protein with a blood nitrogen of only 27 milligrams. I am not certain whether in uremia we get a high total protein in the spinal fluid without any involvement of the central nervous system. Didn't we have a case at the Peter Bent Brigham in which we had a high total protein in the spinal fluid in uremia without any vascular accident? But here there is no uremia and no reason for that total protein. It is not, however, very significant standing alone. Of course we get it sometimes in multiple neuritis, although the spinal fluid is otherwise negative.

The gastric analysis gives us all we need in the way of corroborative evidence that she has pernicious anemia and combined system disease.

I suppose she is going to go on and die of kidney infection. That is the thing we should worry about, I think. Of course she might die of pneumonia. She is open to any sort of infection, much more likely to get an infection than the person whose blood is normal.

A STUDENT: Is the area of calcification noted in the x-ray examination of the spine significant? Don't you think that a tumor of the cord might explain the condition?

DR. FREMONT-SMITH: I do not believe that you can explain these signs on the basis of one lesion. They are bilateral. For instance, I do not see how any tumor can give absent reflexes unless the tumor be at the exact level of the spinal reflex arc. In the case of absent knee jerks this would have to be in the lumbar region. Then how about the accessory changes in her hands? If she had a tumor pressing on the lateral columns, it could press on both lateral and both posterior columns without producing a transverse myelitis. That, however, is hypothesis. I do think they ought to have known where that tumor was or where they thought it might be before they asked for the x-ray. There is a lot of needless x-ray work done.

We knew she had hypertrophic arthritis anyway because every woman of fifty-three probably does show some.

DR. GEORGE W. HOLMES: As Dr. Fremont-

Smith has raised the question of unnecessary x-rays, I might state my position in the matter. There is no doubt, as he said, that there are many unnecessary x-ray examinations, and the request is often so worded that you do not get what you want. You should localize as accurately as you can the part you want examined. Say, "X-ray of the spine. We suspect a tumor in such a location and would like your opinion as to whether one is present." Then we will be able to help you not only by taking the films but by carrying the examination perhaps a little further, if necessary, to answer the question.

In this patient we certainly have no evidence of a cord tumor, but here again the x-ray evidence is not conclusive. Positive evidence is reliable in these cases, negative evidence is of no value.

DR. FREMONT-SMITH: Suppressed breathing over the right lung would be quite consistent with a lobar pneumonia.

How about that big liver and how about the spleen? The spleen may not have been enlarged. It may be a false observation or the spleen may be enlarged because of pernicious anemia. That is one of the causes of enlarged spleen.

Did she have a cirrhosis also? I don't know how to explain the big liver. Gas in the bowel probably is on the same basis with the inability to empty the bladder. Probably the cord lesion gave her a functional paralysis of the bowel. These people often get marked constipation and inability to defecate. We know she had that because her rectum was impacted.

So I think we can say pernicious anemia with corresponding changes in the cord, cystitis, probably pyelitis, no evidence of stone, big spleen perhaps, big liver perhaps, but with a question. The "normal heart" is perhaps the heart that we get with pernicious anemia, flabby, pale heart muscle. It does not usually give evidence of failure.

A STUDENT: Do you think some of her variable symptoms are due to a psychoneurosis?

DR. FREMONT-SMITH: I suppose some of them may be. We have to be careful, however, because she has some symptoms which cannot be explained on that basis.

A STUDENT: Could you get an urticaria when the blood nitrogen is high in uremia?

DR. FREMONT-SMITH: I do not know. We certainly get tremendous itching in uremia, but I have never seen the wheals. Of course here we believe that she has not uremia.

CLINICAL DIAGNOSES

Pneumonia.
Pernicious anemia.
Posterolateral sclerosis.
Empyema.
Pyelitis.

DR. FREMONT-SMITH'S DIAGNOSES

Pernicious anemia.
Combined degeneration of the cord.
Cystitis.
Pyelitis.
Bronchopneumonia?

ANATOMIC DIAGNOSES

Bone marrow hyperplasia (pernicious anemia).
Combined degeneration of the spinal cord.
Pulmonary embolism.
Pulmonary edema and congestion.
Collapse of the lower lobe of the right lung.
Calcification and herniation of the intervertebral cartilage.
Pyelonephritis, left.
Cystitis, slight.
Benign gastric polyp.
Bilateral double ureter.

PATHOLOGIC DISCUSSION

DR. MALLORY: We found a very hyperplastic bone marrow, including a red bone marrow in the femur, though a fatty bone marrow in the tibia. This is characteristic of pernicious anemia though not diagnostic. Microscopically the marked erythroblastic hyperplasia with a high percentage of immature elements is almost pathognomonic. There also was a very definite sclerosis of both the posterior and the lateral tracts of the spinal column.

One question which came up in the diagnosis, from the early part of her history as I remember, was that of cord tumor, and, interestingly enough, she did have something approaching that. At the level of the fifth thoracic intervetebral disc there was a herniation of the disc through the ligament with a projecting mass about three millimeters in height, which seemed to press rather slightly on the cord. Since the fundamental work of Schmorl this has become a well-recognized lesion, simulating a cord tumor symptomatically, but often diagnosable preoperatively if looked for.

The other findings: Her liver was perfectly normal in size, weight 1600 grams, in spite of the fact that it came five centimeters below the costal margin. We might emphasize again that at least three times out of every 100 autopsies, we have a perfectly normal-sized liver that comes two, three, or four centimeters below the margin of the ribs. It is simply an abnormally shaped or abnormally placed liver, not necessarily enlarged.

The kidneys showed slight dilatation of the calices and congenital anomalies in that there was a double ureter on both sides. I do not think that has any significance. There was a definite cystitis, also a mild degree of vascular nephritis.

DR. FREMONT-SMITH: No pyelitis?

DR. MALLORY: Very slight if any.

The lesion in the lungs was not pneumonia but a pulmonary embolus, an early infarction.

A STUDENT: What about the infection, the cystitis?

DR. MALLORY: The vast majority of people with paralyzed bladders will have an infection. I think that is the probable explanation. I don't think the double ureter had anything to do with it.

DR. FREMONT-SMITH: That does not explain her death, because you do not get absorption from a bladder.

DR. MALLORY: The pulmonary emboli were the main causes of death.

DR. FREMONT-SMITH: Were they very large?

DR. MALLORY: They were sufficiently large to block completely the arteries to both lower lobes.

DR. FREMONT-SMITH: Isn't that another example of pulmonary embolus that was missed by x-ray, because here they took a picture after she became acutely sick and the report was negative? It seems to me it was stated here that she ran this high temperature and x-ray examination of the chest was negative. Am I wrong?

DR. HOLMES: Evidently she had the embolus before the plate was taken, so far as we can tell. Could you tell whether the embolus was of several days' duration?

DR. MALLORY: The one on the left we thought had been present several days, the one on the right a shorter time, perhaps a few hours before death.

A still further finding, possibly connecting up with her first symptom of pain in the stomach, was a small benign gastric polyp—a very frequent and characteristic coincidental lesion in pernicious anemia.

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THE BULLETIN OF THE AMERICAN MEDICAL ASSOCIATION

THE attention of our readers is respectfully called to the Bulletin for the Secretaries of the Constituent State and Territorial Medical Associations and the Editors of State Medical Journals as appears on page 839 of this issue.

From this Bulletin it appears that the Secretary of the American Medical Association expects that the President of the United States will come to a decision respecting the advisability of legislation which will deal with some form of sickness insurance.

Information from various sources seems to indicate that there is ground for believing that bills will be introduced at the next session of Congress which will deal with the economic problems of illness and that specific plans will be outlined other than those now in operation under the F.E.R.A. program. The plan seems to be that, under a Medical Advisory Committee, there will be drawn recommendations for legislation by the Committee on Economic Security.

Invitations to join the Medical Advisory Committee have been sent to a number of prominent physicians in the country. Further information as to the personnel of this committee will be of interest and may indicate to some extent the character of the committee report.

While the American Medical Association is given a free hand in suggestions to the committee, the attitude of many of the influential officers of the Association is so well known that the Economic Security Committee may feel that there is nothing more to be learned from that source. With the likelihood that the experience of other countries respecting health insurance will be carefully studied by the Federal government, there is considerable reason to expect that some bill will be drawn relating to this subject with the further probability that legislation will be enacted.

Even though, in the bulletin addressed to Secretaries and Editors, the opposition of the American Medical Association to health insurance is affirmed, it must be realized that the general public is becoming increasingly interested in health insurance, and groups of medical men are studying the subject with care.

With the general acceptance of insurance plans for dealing with the hazards of life, it is not unreasonable to expect that insurance to meet the unpredictable emergencies of illness will appeal more forcibly to the people as time goes on.

The disconcerting situation seems to be that the medical profession has been inclined to voice its opposition to all forms of health insurance and now it is apparent, as has been predicted, that we are on the verge of its development without the controlling influence which would assure fair consideration of the rights of medicine. To the layman the insurance feature will be especially important. The doctor, however, will be more ready to consider the whole problem in its wider aspects including the best interests of the patient and justice to the doctor.

The average layman will be slow to see that the well-supported physician will give the best service, and quality of service to the afflicted should be the most important consideration in any scheme.

The strange feature of the situation is that doctors have seemed to be willing to wait for others to put into operation regulations governing medical practice in the face of the history of other countries.

Government control of medical service under health insurance is in the offing. Effective opposition must be through plans which, in order to be fair to all concerned, must be elaborated in large part by those who know the intricate problems incident to dealing with disease.

RAMON Y CAJAL (1852-1934)

THE passing of Ramon y Cajal in Madrid, Spain, October 17th, removes from the scientific world the greatest scientist produced by that country and a world figure, who made notable contributions to anatomy, particularly the finer histology of the central nervous system. Cajal, born under meagre circumstances, grew up to be the outstanding man of science in Spain entirely as the result of his intense industry and his genius for depicting the minutiae of his subject. He began simply by publishing, in a modest manner, what he saw under his microscope. This was followed shortly by communications sent to foreign journals. At first his work was looked upon by other scientists with suspicion, but when he began to develop the silver stain for the finest cellular elements in the brain, a method first used by the Italian, Golgi, his illustrations became so striking that no one could possibly overlook them. Finally he was invited to Berlin to present his material before the German Society of Anatomists. Here his beautiful specimens, the finest ever seen up to that time, scored a distinct triumph for this unusual man. Publications came from his laboratory year after year, which served to augment this work and to make him the leading neurohistologist of his time. Because of the few translations from Spanish into other languages, the importance of his work was long delayed, but ultimately the man, for what he accomplished, was honored as very few scientists have ever been honored before. He was invited by the Royal Society of London to give the Croonian Lecture and shortly afterwards came to this country, where he lectured at Clark University. The International Medical Congress medal was awarded him in 1903 and Cajal received the Helmholtz Prize and finally the Nobel Prize in 1906, the only Spaniard to receive this award in any field of science.

Outside of Cajal's purely scientific work, one finds much of interest about this extraordinary man. He had absorbing hobbies, one of them being a great love for gymnastics: he developed an extraordinarily powerful body and often devoted as much as two hours a day to gymnastic exercise. In addition, he was fond of walking in the open country, was an ardent amateur photographer and a congenial friend. He could be found daily at a certain café in Madrid drinking coffee, playing chess, or talking with his friends. He called this the "diastole of rest", which he compared with the "systole of work" accomplished in his laboratory. He published a charming book in Spanish, called, "Coffee House Chatter" and another on "Color Photography". His autobiography became a popular book in Spain and has been somewhat widely known outside of that country: first published in 1917, a third edition was issued in 1923. The book adequately covers his extraordinary and unusual life and gives, in addition, a bibliography of his work. It is illustrated by many of his drawings of the finer anatomy of the cortex taken from his scientific papers. For the reader who is not familiar with Spanish an excellent review of Cajal was published by one of his devoted pupils, Dr. Wilder Penfield, in the *Archives of Neurology and Psychiatry* for August, 1926.

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

MERRILL, DUDLEY. A.B., M.D. Harvard University Medical School 1930. Assistant in Medicine, Harvard Medical School. Assistant Resident, Thorndike Memorial Laboratory, Boston City Hospital. Assistant Visiting Physician, Pondville Hospital, Wrentham, Massachusetts. His subject is "Mistaken Diagnoses of Cancer. Case Studies." Page 801. Address: Thorndike Memorial Laboratory, Boston City Hospital, Boston, Massachusetts.

KRINSKY, CHARLES M. M.D. Tufts College Medical School 1933. Intern, Research Service, Worcester State Hospital. His subject is "Treatment of Varicose Ulcer by Gentian Violet." Page 803. Address: Worcester State Hospital, Worcester, Massachusetts.

HERMANSON, LOUIS. M.D. Tufts College Medical School 1930. Out-Patient Surgeon, and Former Resident in Surgery, Beth Israel Hospital. Address: 371 Commonwealth Avenue, Boston, Massachusetts. Associated with him is

GOLDOWSKY, SEEBERT. M.D. Harvard University Medical School 1932. Formerly, Intern in Surgery, Beth Israel Hospital, and Intern in Neurosurgery, Boston City Hospital. Address: Chapin Memorial Hospital, Providence, Rhode Island. Their subject is "Occurrence of Common Duct Stone Following Gall-Bladder Operations." Page 806.

COTTON, FREDERIC JAY. A.B., A.M., M.D. Harvard University Medical School 1894. F.A.C.S. Consulting Surgeon, Boston City Hospital, Faulkner Hospital, Newton Hospital, New England Hospital for Women and Children, Chelsea Memorial Hospital, and Cape Cod Hospital, Hyannis. Address: 520 Commonwealth Avenue, Boston, Massachusetts. Associated with him is

MORRISON, GORDON MACKAY. A.B., M.D. Tufts College Medical School 1926. F.A.C.S. Assistant Out-Patient Surgeon, Boston City Hospital. Visiting Surgeon, Chelsea Memorial Hospital. Junior Visiting Surgeon, Newton Hos-

pital. Consulting Surgeon at Huggins Memorial Hospital, Wolfeboro, New Hampshire, Framingham Union Hospital, and Leonard Morse Hospital, Natick. Address: 520 Commonwealth Avenue, Boston, Massachusetts. Their subject is "Disinfection in Osteomyelitis of the Phalanx (Felon)." Page 809.

SWEET, FREDERICK B. M.D. Yale University School of Medicine 1893. F.A.C.S. Surgeon, Springfield Hospital. Consulting Surgeon, Noble Hospital, Westfield, Massachusetts; Mary Lane Hospital, Ware, Massachusetts; Shrine Hospital for Crippled Children, Springfield, Massachusetts. His subject is "Forty Years." Page 810. Address: 146 Chestnut Street, Springfield, Massachusetts.

WASHBURN, FREDERIC A. B.A., M.A., M.D. Harvard University Medical School 1896. Formerly, Director, Massachusetts General Hospital and Massachusetts Eye and Ear Infirmary. Now, Boston Commissioner of Institutions. His subject is "Hospitals Now and Then." Page 816. Address: 190 Bay State Road, Boston, Massachusetts.

LAMB, SYDNEY. General Secretary of the Merseyside Hospitals Council, Inc., Liverpool, England. His subject is "British Hospital Contributory Schemes." Page 821. Address: Merseyside Hospital, Liverpool, England.

MISCELLANY

NEWLY ELECTED FELLOWS TO THE AMERICAN COLLEGE OF SURGEONS

According to the *Boston Transcript*, thirteen Boston men were among the 595 admitted Friday evening, October 19, as Fellows of the American College of Surgeons at an impressive ceremony in Symphony Hall. The exercises, at which were awarded honorary fellowships to four distinguished surgeons from abroad, brought to an end the extensive program of the twenty-fourth clinical congress of eminent specialists of this country and Canada.

The Boston surgeons were Richard Chute, Fletcher H. Colby, H. Hamilton Cooke, G. Kenneth Coonse, Emilio D'Errico, Henry Hardwick Faxon, Walter S. Levenson, Langdon Parsons, Thomas H. Peterson, John W. Spellman, Benjamin Tenney, Jr., Richard H. Wallace and Robert Zollinger.

Other Massachusetts candidates were Dr. Denton G. Nutter of Newton Center, Dr. Edward J. Reynolds of Malden, Dr. Thomas Edward Culliton of Lynn, Dr. Arthur M. Jackson of Everett, Dr. Harry B. Perkins of Haverhill, Dr. Oswald T. Fleury and Dr. Arthur L. Kinne of Holyoke, and Dr. Honoré E. Gaudreau of Springfield.

Other New England surgeons admitted to fellowship were:

Connecticut—Shirley Harold Baron, New London; Richard C. Buckley, Hartford; Louie Nixon Claiborn, New Haven; Stephen P. Donnelly, New Britain; George G. Fawcett, South Norwalk; George C. Finley, Hartford; Carl J. Gade, Bridgeport; E. Philip Kemp, Bridgeport; Louis O. LaBella, Middletown; Joseph A. LaPalme, Putnam; William H. McMahon, Jr., South Norwalk; Robert H. Osmond, Jr., Hartford; Maurice M. Pike, Hartford; Francis A. Sutherland, New Haven; R. Glen Urquhart, Norwich; James L. Vickers, Greenwich; Stanley B. Weld, Hartford.

Vermont — Bird J. A. Bombard, Burlington; Charles H. Goyette, Barre; Arthur R. Hogan, Burlington.

New Hampshire — W. J. Paul Dye, Wolfeboro; Lawrence R. Hazzard, Portsmouth.

Maine — Charles H. Burgess, Bangor; Edwin M. Fuller, Bath; Ralph A. Goodwin, Auburn; Herrick C. Kimball, Fort Fairfield; Eaton Shaw Lothrop, Portland.

Rhode Island — Linwood H. Johnson, Westerly; Frank I. Matteo, Providence; Henry B. Moor, Providence.

Surgeons receiving honorary fellowships were Sir Harold Gillies, C.B.E., F.R.C.S., of London, plastic surgeon at St. Bartholomew's Hospital; Professor Josef Halban, M.D., professor of gynecology at the University of Vienna; Harry Platt, M.S., F.R.C.S., lecturer in orthopedic surgery at the University of Manchester; and Bethel Solomons, M.D., F.R.C.P.I., F.C.O.G., of Dublin, examiner in obstetrics and gynecology at the Royal College of Physicians and Surgeons of Ireland and at Durham University.

HEALTH OFFICERS' MONTHLY STATEMENT OF VENEREAL DISEASES IN NEW ENGLAND

REPORTED AUGUST, 1934

State	*Syphilis*		*Gonorrhea*	
	Cases reported during month	Monthly case rates per 10,000 population	Cases reported during month	Monthly case rates per 10,000 population
Connecticut*	185	1.12	169	1.03
Maine	49	.61	46	.57
Massachusetts	401	.93	680	1.58
New Hampshire	22	.47	35	.75
Rhode Island	70	1.00	77	1.10
Vermont	15	.42	29	.80

*Incomplete.

—*From the Treasury Department, Public Health Service.*

RÉSUMÉ OF COMMUNICABLE DISEASES IN MASSACHUSETTS FOR SEPTEMBER, 1934

Anterior poliomyelitis had its lowest reported September incidence in the State history.

Diphtheria for 1934 through September is running forty per cent lower than in 1933, itself a record breaking year.

Pulmonary tuberculosis morbidity remains below the five year average, and every indication points to a lower mortality for the year.

Dog bite continues to be reported higher than in previous years.

Measles continues to run unusually low after the epidemic of the past winter.

Typhoid fever to date is running twenty-four per cent lower than in 1933.

Chicken pox and whooping cough were reported slightly above the five year average.

Lobar pneumonia, scarlet fever, mumps, epidemic cerebrospinal meningitis, and German measles show nothing remarkable.

MONTHLY REPORT FOR SEPTEMBER, 1934

Disease	Sept., 1934	Sept., 1933	Average*
Anterior Poliomyelitis	8	83	162
Chicken Pox	101	81	94
Diphtheria	37	58	132
Dog Bite	756	575	520
Epidemic Cerebrospinal Meningitis	5	1	6
German Measles	19	10	24
Gonorrhea	556	648	575
Lobar Pneumonia	90	82	89
Measles	43	79	100
Mumps	75	98	97
Scarlet Fever	274	292	306
Syphilis	284	362	285
Tuberculosis, Pulmonary	276	257	298
Tuberculosis, Other Forms	38	31	44
Typhoid Fever	22	23	33
Undulant Fever	1	0	
Whooping Cough	506	500	456

*Average number of cases for preceding five years.

RARE DISEASES

Anterior poliomyelitis was reported from Bellingham, 1; Boston, 1; Brookline, 1; Everett, 1; Framingham, 1; Hanson, 1; Melrose, 1; Springfield, 1; total, 8.

Dysentery (amebic) was reported from Brockton, 1; Worcester, 1; total, 2.

Dysentery (bacillary) was reported from Belchertown, 3; Boston, 1; Danvers, 4; Everett, 3; Lexington, 2; Malden, 1; Melrose, 1; Northampton, 10; Warren, 20; total, 45.

Malaria was reported from Boston, 1; Quincy, 1; total, 2.

Cerebrospinal meningitis was reported from Lawrence, 1; Malden, 1; North Adams, 1; Salem, 1; Winchester, 1; total, 5.

Pellagra was reported from Ludlow, 1.

Septic sore throat was reported from Boston, 1; Lowell, 3; Malden, 1; Northampton, 2; total, 7.

Tetanus was reported from Amherst, 1; Millbury, 1; Somerville, 1; Webster, 1; total, 4.

Trachoma was reported from Boston, 1; Worcester, 1; total, 2.

Trichinosis was reported from Boston, 1; Brockton, 1; Worcester, 1; total, 3.

Paratyphoid fever was reported from Boston, 1.

Undulant fever was reported from Ayer, 1.

CORRESPONDENCE

COMMENT ON REPORT OF MATERIAL PRESENTED TO THE AMERICAN COLLEGE OF SURGEONS

New England Journal of Medicine,

May I request the privilege of access to your columns on behalf of my colleagues and myself in relation to the very unfortunate series of stories which appeared in the local newspapers on Saturday and Sunday, October 20 and 21?

The material which we presented to the College of Surgeons on Friday, the 19th, was no more than a brief review of the results of a series of investigations of sterility which have been under way for several years past. Individual aspects of the work have already been reported in the periodical literature, and Dr. Meaker in Rome and the writer in London have offered surveys of this study to the members of two International Congresses. The unfortunate and misleading form in which our simple presentation was reported is doubly to be regretted, not only as it makes extravagant claims for the success of our approach, claims which are not in conformity with fact; but even more as it cannot fail to engender unwarranted hopes in the minds of lay readers, leading to ultimate further disappointment. This latter feature is the most regrettable phase of the whole unfortunate affair.

We would suggest to the members of the profession that the book on "Human Sterility" which has recently appeared from Dr. Meaker's pen embodies the technique of our approach, reports the characteristic findings which the study has developed, and offers a conservative estimate of the possibility of correction in a given individual mating. Unhappily it is impossible for us to reach the lay public which has had access to these newspaper stories. We can only beg our friends and colleagues to render their aid in the prevention of a further dissemination of false hopes, while still allowing patients to understand that advantage may derive from thorough and complete investigative study.

The marriage which is involuntarily childless lays a heavy social burden on the unhappy couple. It is deplorable that ill-judged publicity may awaken hopes which are incapable of fruition, thus adding a further poignancy to the initial misfortune.

With deep appreciation of the opportunity to place this matter briefly before the medical profession in New England, I am

Faithfully yours,

ALLAN WINTER ROWE, Ph.D.,
Director of Research, Evans Memorial,
80 East Concord Street, Boston, Mass.

OFFICIAL ACTION OF THE BOARD OF REGISTRATION IN MEDICINE

Board of Registration in Medicine
State House, Boston

October 26, 1934.

New England Journal of Medicine,

This is to inform you that Dr. Everett D. Hooper, whose registration as a physician in Massachusetts was canceled on May 24, 1928, was in accordance with the vote of the Board of August 30, 1934, re-registered as a physician in this Commonwealth.

Very truly yours,

STEPHEN RUSHMORE, M.D., *Secretary.*

BULLETIN FOR THE SECRETARIES OF THE CONSTITUENT STATE AND TERRITORIAL MEDICAL ASSOCIATIONS AND FOR THE EDITORS OF STATE MEDICAL JOURNALS

October 26, 1934.

On October 12, 1934, I forwarded a bulletin to the secretaries of all constituent state and territorial medical associations. The first part of that bulletin, pertaining to the Committee on Economic Security, was marked "Confidential" for the reason that at that time we entertained some hope that the organized medical profession would be asked to be officially represented on the Medical Advisory Committee which is in process of organization by the Executive Director of the Committee on Economic Security. We have now received official information from Prof. Edwin E. Witte, Executive Director of the Committee on Economic Security, that in connection with the organization of the Medical Advisory Committee selections have been made on an individual basis without asking for nominations from any organization.

In a letter received from Professor Witte under date of October 13, written in reply to a letter from the Secretary of the American Medical Association, the following information is submitted:

1. The Director of the Bureau of Medical Economics of the American Medical Association will be invited to go to Washington to discuss "the economic aspects of the problems of medical care of people in very low income groups".

2. The Medical Advisory Committee now being organized will be composed of physicians selected on an individual basis. At the time Professor Witte's letter was written, not all of those who had been invited to serve on the Medical Advisory Committee had replied.

3. The names of the prospective members of the Medical Advisory Committee would not be disclosed. (In a letter received from Professor Witte under date of October 22, it is stated that he hopes "to announce the Medical Advisory Committee in the very near future," and that he is "planning committees of consultants in the fields of dentistry, hospital management and public health".)

4. The Committee on Economic Security will be glad to have suggestions from the American Medical Association or its officers on any phase of its work at any time. (It is presumed that the Committee will likewise welcome suggestions from state medical associations or from the officers of those organizations.)

5. Professor Witte will make an effort to visit the offices of the American Medical Association "shortly before the New Year".

6. The assurances of coöperation extended by the Board of Trustees and officers of the American Medical Association are sincerely appreciated.

Accompanying Professor Witte's letter of October 22 is a mimeographed copy of an "Information Primer" of the Committee on Economic Security. This is not dated but was evidently released before October 13, since a statement based on this release appeared in the *New York Times* for that date. In the "Primer" it is stated that the report of the Committee on Economic Security to the President is due to be made on December 1, 1934, and will not be made public until released by the President. It is also stated that among the studies initiated by the Committee on Economic Security is one on "Provisions for Meeting the Economic Risks of Illness," and that Mr. Edgar Sydenstricker and Dr. I. S. Falk, both of whom are in the employ of the Milbank Fund, are in charge of this particular study. Professor Witte informs me that neither Mr. Sydenstricker nor Dr. Falk will be a member of the Medical Advisory Committee of the Committee on Economic Security.

Dr. Walter L. Bierring, President of the American Medical Association, has been invited to serve as a member of the Medical Advisory Committee and has accepted. The invitation was addressed to Dr. Bierring as an individual and not as President of the American Medical Association. I have heard that the President of the American College of Surgeons and the President of the American College of Physicians have received similar invitations, though this information did not come from official sources in Washington.

It seems reasonable to assume that the President of the United States, after the report of the Committee on Economic Security has been submitted to him on or about December 1, will decide whether or not plans for providing some system of sickness in-

surance will be included in the program of social insurance which it is reported he will submit to Congress.

A member of the last Congress, who is seeking reëlection in the November elections, has addressed letters to physicians in Illinois in which it is stated that he has been informed that a bill providing for sickness insurance will be introduced at the next session of Congress. I am informed that similar statements have been made by other Congressmen. The Illinois candidate for Congress has asked physicians to give him the benefit of their views with respect to sickness insurance. Printed material dealing with this subject has been forwarded to him and to other candidates for election as Congressmen.

A letter received at the offices of the American Medical Association from the President of the National Congress of Parents and Teachers states that a letter from the Twentieth Century Fund was before the Board of the National Congress of Parents and Teachers asking that body to "endorse President Roosevelt's plan for Health Insurance," and was rejected by the Board.

In the "Information Primer" released by the Committee on Economic Security, the following statement is made:

> "Following the approach outlined by the President, the Committee is trying to draw up a comprehensive program which will give protection to the individual from all the vicissitudes and hazards of modern life—unemployment, accident, sickness, invalidity, old age, and premature death.
>
> "It is, of course, not contemplated that this program shall go into effect in its entirety immediately, but it is planned to give Congress and the country a 'look ahead' as well as some recommendation for immediate action, to the end that there may be developed, from the outset, a unified plan for economic security."

It seems quite probable that no hearings on sickness insurance will be held under the auspices of the Committee on Economic Security. It is, of course, presumed that if any bill providing for sickness insurance is submitted to Congress, official hearings will be held by the committee to which such bill will be referred.

Since the American Medical Association and many of its constituent medical associations have gone on record in opposition to sickness insurance, it is extremely desirable that the views of the organized medical profession should be made known to members of Congress and to candidates for election as members of that body. It is suggested, therefore, that the officers of constituent state medical associations and of component county medical societies and the members of the legislative committees of these bodies immediately develop plans for acquainting members of Congress and candidates for election to that body with the expressed official views of the organized profession in the United States pertaining to sickness insurance. Most of the members of Congress and all the candidates for election *are now at home.*

In the meantime, an earnest effort will be made further to inform the Executive Director of the Committee on Economic Security and the members of that Committee concerning the official attitude of the American Medical Association with respect to sickness insurance and the basis of the Association's opposition to any plan involving governmental control of medical practice.

Very sincerely yours,

OLIN WEST, M.D., *Secretary,*
American Medical Association.
535 North Dearborn Street,
Chicago, Illinois.

PUERPERAL INVERSION OF THE UTERUS

Editor, *New England Journal of Medicine,*

After having seen Dr. Barney Edward Sachs' article on inversion of the uterus in the September 20, 1934 issue of the *New England Journal of Medicine,* I wish to relate my own experience of a case of inversion of the uterus. Such notes as I may have made of this case are not now available, hence I am writing from memory.

One evening many years ago, fifteen or more, in Norwood, Mass., I was called to take some one else's confinement. I called a district nurse, and two came with me as they were rooming together. After arriving at the patient's home I found a woman twenty-eight to thirty years old, a primipara in labor, apparently at term, a fairly strong and well-nourished woman. Pelvic measurements and pubic arch were good. Labor pains increased, and after waiting for an hour or two without much progress in dilatation of the cervix, I made a further examination of the patient outside of and in the vagina, and decided I had a left occiput posterior. The baby weighed probably about nine pounds. The cervix was soft, dilatable. I waited for some time, then decided to operate.

Meantime my sterilizer had been working, so gloves and instruments were ready and nurses had prepared the bed, done the lying-in toilet, and prepared clean things. One nurse began giving ether. As soon as the patient was etherized, I began dilating the soft parts and cervix, and as soon as my left hand was in the vagina and it was inserted through the cervix, I passed it gently along to the baby's hips which I rotated a quarter of a circle, then the body, shoulders and lastly the head. As soon as I began operating, I assigned the other nurse to place her outspread hands at the patient's left flank, because a baby once loosened from its hold in the uterus may drop around in various ways and will not stay where one has rotated it. When I was through rotating, I asked the etherizer to push down on the baby's buttocks hard, so as to fix the head under the pubic arch. Then one may apply instruments over the

baby's ears at his leisure. With considerable help from the etherizer pressing down from above and making use of traction rods, I got the baby fairly easily and without injury to the baby or its mother, who made a normal postpartum recovery.

In about two weeks' time I was called to see the patient because there was a moderate bloody discharge. I cannot now say whether the bloody discharge had at once entirely stopped. Apparently it had, and the new appearance of the bloody discharge was the reason for my summons. Learning what I could from the patient I scrubbed up and examined the patient, and at once realized there was no cervix but instead a soft boggy mass in the vagina. Then I renewed my examination above the pubic arch and of course could find no sign of the uterine fundus. I soon concluded that the patient had an inverted uterus. I had made a short and vain attempt to reduce the inversion.

I then went to my friend Dr. Arthur S. Hartwell, told him the story, and he went with me to the patient. After examination he soon verified my findings. At that time there was no hospital in Norwood.

The next day I sent the patient to the Deaconess Hospital and engaged Dr. J. C. Hubbard of Boston to operate. He did so the next day after her arrival. I etherized. Dr. Hubbard examined the patient per vagina and abdomen, and verified my findings, then opened the abdomen with a median incision. After vainly trying to reduce the inversion, he opened the uterus and soon reduced the inversion, then closed the uterus and abdomen. The patient made a quick recovery and went home in two weeks. I saw her a few times after she returned home, where she completed her recovery. I do not know whether she ever became pregnant again.

Yours truly,

E. C. Norton, M.D.

Stony Hill Road, North Chatham, Mass.

PRO DISCIPLINA MATHEMATICA

Editor, *New England Journal of Medicine*,

In the interesting and easily misunderstood article on the Future of Psychiatry which appeared in the *Journal* of September 27, 1934, I find a paragraph dealing chiefly with the study of the field of the mathematical sciences in preparation for medicine. Dr. Stearns begins by stating his belief that the premedical training is "grossly overweighted in the field of mathematical science". The minimum requirement of the collegiate premedical course of sixty semester hours (an approximation to exactitude) must cover eight hours in physics and eight hours each in general and inorganic chemistry. Twenty-four sixtieths would not seem to be "gross" overweighting.

Then he refers to the inference that, because students who do well in the mathematical sciences also do well in medicine, the mathematical sciences are important in the preparation for medicine. He evidently thinks that inference is unwarranted and from the finding of fact which he does not question, he concludes that "a screen has been set up at the portals of American medical schools, excluding all of those excellent personalities and intellects which did not excel in mathematics".

The finding of fact, as stated by Dr. Stearns, seems to be that students who did well in mathematics in high school tended to do well in physics and chemistry in college, and that students who did well in mathematics and physics and chemistry in college tended to do well in medical school.

I would like to emphasize another fact, namely, that the only conclusion which may be drawn legitimately from this finding is the finding itself, that is, "that students who did well in mathematics in high school" and so forth "tended to do well in medical school". No conclusion as to why they tended to do well is legitimate.

There is absolutely no warrant in the findings for the conclusion that the mathematical sciences prepare well for medicine. If true, it must have some other foundation. There is absolutely no basis in the findings for another conclusion which as a hypothesis seems more reasonable, that the kind of mind which does well in the mathematical sciences will do well in medicine. It may be true, but it must have some other foundation.

Again there is no basis in the findings for the conclusion that a "screen has been set up . . . excluding all of those excellent personalities which did not excel in mathematics" nor for the inference "that the selection of the student body . . . was weighted against the socially minded".

Lord Kelvin said, "Our knowledge begins when we can measure what we are talking about and express it in numbers." By this test the practice of medicine is perhaps even to-day founded more on pseudoscience than on science, yet its only durable foundation is science. William James expressed the hope that psychology might some day become a science, and wrote two large volumes about it. Until psychology becomes a science, psychiatry must have an insecure foundation. By Lord Kelvin's test it is an unwarranted generosity to call endocrinology a science: we expect that it will become a science some day.

In the social sciences, there is a vast amount of "fuzzy, wuzzy" thinking, frayed at the edge, and much "social mindedness" is shot through and through with sentimentality. We hope some day to have a true social science that goes beyond the mere recording of observations.

A trouble with much of our mental activity to-day is that it shows so little evidence of the rigorous thinking by which alone science progresses. Perhaps our greatest social need is rigorous thinking. Medicine certainly needs it, as almost any article on a medical subject, even medical education, will indicate. It is in the mathematical sciences that the habit of rigorous thinking may be best acquired. Only an ignorant person would conclude that by

taking a course in mathematics one would thereby certainly acquire the habit of thinking rigorously.

Social mindedness also is necessary, but without rigorous thinking it is sounding brass and a tinkling cymbal. If there is any effort at weighting in the premedical training, one suspects that it is in a vain effort to favor rigorous thinking.

STEPHEN RUSHMORE, M.D.

A TRIBUTE TO THE SURGEONS OF THE ATLANTIC SEABOARD

October 22, 1934.

Editor, *New England Journal of Medicine*,

Apropos of that unfortunate interview! It may be well to recall the fact, that once upon a time, Dr. Charles Mayo left the "Surgeons of Surgeons," came directly through Chicago and Cleveland, and had his gallbladder operation performed on the Atlantic seaboard.

This incident will illustrate some differences of opinion among our surgical leaders.

Very truly yours,

THOMAS W. LUCE.

Portsmouth, New Hampshire.

RECENT DEATHS

HICKEY — JOHN A. HICKEY, M.D., of East Boston and 238 Shore Drive, Winthrop, Massachusetts, died October 26, 1934. He was born in Boston in 1866, graduated from the Lyman School in East Boston and from the Boston Latin School and Boston College.

He graduated from the Medical School of Harvard University in 1896.

A sister, Katherine Hickey, of Winthrop, survives him.

NASON—OSMAN CLEANDER BAKER NASON, M.D., of Pleasant Street, Franklin, Massachusetts, and formerly of 148 Berkshire Street, Cambridge, died October 7, 1934.

Dr. Nason was born in 1858. He had been a retired Fellow of the Massachusetts Medical Society since 1923, having joined in 1895.

He was graduated from the Boston University School of Medicine in 1891.

HOWARD—CHARLES J. HOWARD, M.D., of 147 Grampian Way, Dorchester, died at his home October 25, 1934.

He was born in Holyoke, Massachusetts in 1873 and graduated in medicine from the University of Columbia College of Physicians and Surgeons.

He was a member of the Colorado State Medical Society and the American Medical Association.

For the past fifteen years he was on the staff of the United States Veterans' Administration.

Surviving are his widow, Frances Davey Howard; a brother, Professor John W. Howard of the Faculty of the Massachusetts Institute of Technology, and two sisters, Catherine E., and Mabel S. Howard.

FOLIN—OTTO FOLIN, M.D., Professor of Biological Chemistry at Harvard University, died October 25, 1934.

He was born in Sweden in 1867 and came to this country in 1882. He graduated in medicine from the University of Lund, Sweden, in 1918, but his major interests were in other scientific fields. He was especially noted for his work on the chemistry of blood, and held scientific degrees from the University of Michigan, the University of Chicago, and the University of Washington. He was a research chemist at the McLean Hospital in Waverley from 1900 to 1908.

Dr. Folin was a member of a large number of scientific societies and contributed articles to scientific journals.

His widow, Mrs. Laura Church (Grant) Folin; a son, Grant Folin of Detroit, and a daughter, Dr. Teresa Folin, survive him.

His home was at 133 Buckminster road, Brookline.

STURGIS — WALTER HORATIO WAKEMAN STURGIS, M.D., of Hull, Massachusetts, died at his hospital, October 29, 1934. He was born in 1873 at Fairfield, Vermont, was educated in the schools of Fairfield and the University of Vermont, and received his M.D. degree from the Baltimore Medical College in 1895.

He was a Fellow of the Massachusetts Medical Society, having joined in 1896, and also of the American Medical Association.

Dr. Sturgis served in the World War with the 71st heavy artillery and won promotion.

He was commended by the Humane Society for completing a hazardous trip to Boston Light to attend the keeper's wife in childbirth.

For several years he worked under the handicap of disease, but served his community with unfailing devotion.

His memberships included the Masonic, Elks, Odd Fellows and the Knights of Pythias lodges, and he was active in all civic activities.

He was twice married. His first wife was Mrs. Anna T. (Sylvester) Sturgis and the second, Mrs. Mildred Foley Sturgis, who, with two daughters and three sons, survives him.

NOTICES

The Massachusetts Medical Society

SECOND ANNUAL POSTGRADUATE MEDICAL EXTENSION COURSE

The following sessions have been arranged by the Committee:

Barnstable

Sunday, November 4, at 4:00 P.M., at the Cape Cod Hospital, Hyannis. Subject: Pediatrics (Third Session). John I. B. Vail, M.D., Chairman.

Berkshire

Thursday, November 8, at 4:00 P.M., at the House of Mercy Hospital, Pittsfield. Subject: Surgery. Albert C. England, M.D., George S. Reynolds, M.D., Chairmen.

Bristol North (Taunton Section)

Wednesday, November 7, at 7:30 P.M., at the Morton Hospital, Taunton. Subject: Surgery. Arthur R. Crandell, M.D., Chairman.

Bristol South (Fall River Section)

Monday, November 5, at 4:00 P.M., at the Stevens Clinic of the Union Hospital, Prospect Street, Fall River. Subject: Cardiovascular Disease (Second Session). Eugene A. McCarthy, M.D., Sub-Chairman.

Essex North

Tuesday, November 6, at 4:00 P.M., at the Hotel Bartlett, 95 Main Street, Haverhill. Subject: Surgery (Third Session). Francis W. Anthony, M.D., Chairman.

Essex South

Tuesday, November 6, at 4:00 P.M., at the Salem Hospital, Salem. Subject: Surgery (Third Session). Walter G. Phippen, M.D., Chairman.

Hampden

Thursday, November 8, at 4:00 P.M., at the Academy of Medicine, Professional Building, 20 Maple Street, Springfield, and at 8:00 P.M., at the Holyoke City Hospital, Holyoke. Subject: Cardiovascular Disease (Third Session). George L. Schadt, M.D., Chairman.

Hampshire

Wednesday, November 7, at 4:15 P.M., in the Nurses' Home of the Cooley Dickinson Hospital, Northampton. Subject: Pediatrics (Second Session). Robert B. Brigham, M.D., Chairman.

Middlesex East

Wednesday, November 7, at 4:00 P.M., at the Melrose Hospital, Melrose. Subject: Obstetrics and Gynecology (Third Session). Joseph H. Fay, M.D., Chairman.

Middlesex North

Friday, November 9, at 7:00 P.M., at the St. John's Hospital, Lowell. Subject: Surgery (Second Session). Frederick P. Murphy, M.D., Chairman.

Middlesex South

Monday, November 5, at 4:30 P.M., at the Cambridge Hospital, Mt. Auburn Street, Cambridge. Subject: Endocrinology (Third Session). Charles E. Mongan, M.D., Chairman.

Norfolk

Friday, November 9, at 8:30 P.M., at the Norwood Hospital, Norwood. Subject: Surgery (Second Session). Hugo B. C. Riemer, M.D., Chairman.

Monday, November 5, at 4:00 P.M., at the Faulkner Hospital, Jamaica Plain. Subject: Cardiovascular Disease (First Session). Hugo B. C. Riemer, M.D., Chairman.

Norfolk South

Monday, November 5, at 8:30 P.M., at the Quincy City Hospital, Quincy. Subject: Cardiovascular Disease (Third Session). David L. Belding, M.D., Chairman.

Plymouth

Tuesday, November 6, at 4:00 P.M., at the Brockton Hospital, Brockton. Subject: Obstetrics and Gynecology (First Session). Walter H. Pulsifer, M.D., Chairman.

Worcester

Wednesday, November 7, at 7:30 P.M., in the Auditorium of the Nurses' Home of the Memorial Hospital, Worcester. Subject: Surgery (First Session). Erwin C. Miller, M.D., Chairman.

Worcester North (Ayer Section)

Thursday, November 8, at 8:00 P.M., at the Ayer Community Memorial Hospital, Ayer. Subject: Pediatrics (Second Session). Frank S. Bukeley, M.D., Chairman.

Worcester North (Fitchburg Section)

Friday, November 9, at 4:30 P.M., at the Burbank Hospital, Fitchburg. Subject: Obstetrics and Gynecology (Second Session). Edward A. Adams, M.D., Chairman.

CLINIC AT THE PETER BENT BRIGHAM HOSPITAL

At 3:30 P.M. on Thursday, November 8, in the Amphitheatre of the Peter Bent Brigham Hospital Dr. Henry A. Christian, Physician-in-Chief, Hersey Professor of the Theory and Practice of Physic in the Harvard Medical School, will give a medical clinic. To it are cordially invited practitioners and medical students. These clinics will be repeated on Thursdays until May.

On Saturdays in the wards of the Peter Bent Brigham Hospital, from 10 to 12, staff rounds will be conducted by Dr. Christian. These are open to all physicians.

HARVARD MEDICAL SCHOOL

THE GEORGE W. GAY LECTURE ON "MEDICAL ETHICS"

Amphitheater C at 5 P.M.

Thursday, November 1 — "Understanding the Individual Patient." Dr. Arthur H. Ruggles of Providence, R. I.

LECTURES ON "THE CARE OF THE PATIENT"

Amphitheater C at 5 P.M.

Thursday, November 15—Dr. Joseph H. Pratt of Boston.

Thursday, November 22—Dr. Stephen Rushmore of Boston.

ASSIGNMENT OF MEDICAL DIRECTOR J. S. BOGGESS

Medical Director J. S. Boggess will be relieved from duty at Louisville, Ky., about November 4 and assigned to duty at East Boston, Mass., in charge of Service activities at the U. S. Immigration Station at that place.

THE CUTTER LECTURE ON PREVENTIVE MEDICINE

By Charles Sidney Burwell, M.D., Professor of Medicine, Vanderbilt University School of Medicine, Nashville, Tennessee

The Prevention or Postponement of Death from Heart Failure

Thursday, November 8, 1934
At the Harvard Medical School
Amphitheatre Building E, 5 P.M.

These lectures are given annually under the terms of a bequest from John Clarence Cutter, whose will provided that the lectures so given should be styled the Cutter Lectures on Preventive Medicine and that they should be delivered in Boston and be free to the medical profession and the press.

The medical profession, medical and public health students, the press and others interested are cordially invited to attend.

REMOVAL

Austin W. Cheever, M.D., announces the removal of his offices to 41 Bay State Road, Boston.

William G. Barrett, M.D., announces the removal of his office from 80 Marlborough Street, Boston, to 37 Marlborough Street, Boston.

REPORTS AND NOTICES OF MEETINGS

LECTURE ON THE MECHANISM OF EPILEPSY

Under the auspices of the Alpha Omega Alpha Society of the Harvard Medical School, Dr. Wilder Penfield lectured at the Harvard Medical School on the eighteenth of October on "The Mechanism of Epilepsy." After a brief introduction by Dr. Elliott C. Cutler, Dr. Penfield began his lecture by pointing out the importance of epilepsy, there being more than half a million people on the North American continent afflicted with this malady. He gave Jackson's definition of epilepsy as "the name for occasional local discharges of the grey matter". The character of the discharges may vary greatly, and there are usually crude and purposeless movements or sensations or dreams. The seizure spreads progressively over the surface of the hemisphere involved, and not along association paths. It was the old idea that the contraction of the blood vessel of the pia mater caused this, and in recent times it has been shown that these vessels do have a definite nerve supply and nerve endings. This nerve supply causes both vasoconstriction, when the sympathetic components are stimulated, and vasodilatation when the parasympathetics are stimulated. These vasodilator fibres pass up the vagus into the medulla oblongata, and may be stimulated anywhere in their pathway, causing alterations of from one-tenth to one-fifth of the vessel's diameter, changes which are slight in comparison with the peripheral changes caused by similar stimulation.

In autopsies performed on epileptic patients, there is periarterial destruction, due to the constriction of the vessels and the death of the tissues around them. Dr. Penfield has operated on several cases of epilepsy, and has caused seizures by the stimulation of vasoconstrictor fibres. He noticed that such stimulation caused widespread arrest of the usual visible pulsations of the vessels on the surface of the brain, and that this vasomotor activity was more or less widespread over the entire body. The veins of the brain often collapsed in such seizures, and the findings suggest that under these conditions very little blood gets through the capillary bed in the brain. He has never seen any shrinkage of the brain tissue which has been so often reported.

There are certain definite sequelae: first, there is often a dilatation after an attack, so that the vessels pulsate vigorously, and the veins often take on an arterial hue. This means that either the capillary bed is dilated, or that there is a short circuit from the arterioles to the venules without passing through the capillary bed, or that the tissues do not take up oxygen; secondly, general anemia of the brain or anemic spots seen as white areas on the surface of the brain may follow the attacks; thirdly, there may be spasmodic closure of the large arteries. This was seen in six cases and was either a single isolated spasm of a short portion of the artery, or consisted of multiple constrictions lasting from fifteen to thirty minutes. Such constrictions have never been seen in experimental animals, and have never been caused by stimulation of the sympathetics or parasympathetics.

Mild stimulation of the brains of these patients causes normal movements. However, if the stimulus was extensive, the movements continued after the stimulation stopped and spread to other parts, causing a typical Jacksonian attack with unconsciousness. It seems probable, therefore, that there is a spreading vascular change which sets up a reflex causing a continued nervous discharge. It is interesting to note that light ether anesthesia abolishes epileptic responses, as it also abolishes Renaud's attacks. Dr. Penfield believes that there is only one physiological cause of epilepsy, while there may be many pathological causes, both direct and indirect.

During the exploration of cases with idiopathic epilepsy, where there is apparently no cause, the most pronounced vasomotor responses may be seen. The vessels are abnormally irritable. Such cases usually appear before puberty, and often are aggra-

vated at the time of menstruation. The hyperirritable brain is apparently set off by changes in the body which have no effect on the normal person. The movements may be tonic or clonic, and usually they begin as tonic movements.

Postepileptic paralysis in cases of epilepsy often causes paralysis of the part most involved in the seizure. There may be complete hemiplegia, usually coming only after long duration of Jacksonian attacks. Such paralysis may follow sensory, as well as motor attacks, or there may be paralysis without any other manifestation. These are to be explained from the arterial spasm and anemias described above. Consciousness is lost about the time that the head and eyes turn toward the side of the attack. Petit mal seizures may consist of only a blank expression, and may be unrecognized by the patient. There is often an aura of epigastric sensation and a facial blanching. It is believed that the center controlling these changes lies near the hypothalamus. Some cases have a sudden feeling of strangeness, but do not lose consciousness; others lose conscious control of the body and do not know of vicious actions following the attack. Such epileptic insanity is usually violent.

Dr. Penfield closed his lecture by saying that there is much to be learned concerning epilepsy; that the manifestations may not be entirely vasoconstrictor, but that there is a definite reflex involving the vasomotor center in the region of the diencephalon.

THE MASSACHUSETTS MEDICAL BENEVOLENT SOCIETY

An important Annual Meeting of the Massachusetts Medical Benevolent Society was held at the Boston Medical Library on October 25, 1934. The members of the Society were addressed by Dr. Walter P. Bowers, Managing Editor of our Journal, who made suggestions for increasing the usefulness of the Society.

He thought that the members of the Massachusetts Medical Benevolent Society should show greater activity in order to increase funds so that a larger number of indigent physicians or their families who are worthy objects of consideration should be helped. He suggested means for increasing publicity in regard to the work of the Society and for obtaining money from grateful patients to add to the funds and so increase the number of beneficiaries.

During the discussion, the Treasurer reported that twenty-two physicians or their families were being aided during 1934. These grants are made quietly by the Treasurer, with the approval of the Council. The names of the beneficiaries are not disclosed to any others.

The demand for such aid is greater than ever. With increased support from the medical profession and interested donors, a greater amount of help could be given.

The following officers were elected:

President: Dr. George Gray Sears.
Vice-President: Dr. Robert M. Green.
Treasurer: Dr. Roger I. Lee.
Secretary: Dr. Hilbert F. Day.
New Trustees: Dr. Reginald Fitz, Dr. Elliott C. Cutler, Dr. Arthur W. Allen, Dr. Francis W. Palfrey.

PHI DELTA EPSILON FRATERNITY OF BOSTON UNIVERSITY SCHOOL OF MEDICINE

Phi Delta Epsilon Fraternity of Boston University School of Medicine announces another series of its open meetings. Dr. Fuller Albright of the Massachusetts General Hospital will speak on the Endocrinological Aspects of Amenorrhea.

The meeting will be held at the Evans Memorial Hospital Auditorium, 80 East Concord Street, Boston, on November 9, 1934, at 8 P.M. Dr. Samuel R. Meaker of the Boston University School of Medicine will discuss the paper.

WILLIAM HARVEY SOCIETY

The next meeting of the William Harvey Society will be held November 9 in the Auditorium of the Beth Israel Hospital, Boston, at 8:00 P.M.

PROGRAM

Speaker: Dr. Foster Kennedy, Cornell Medical School.

Subject: "The Bio-Psychic Approach to Diseases of the Mind, Its Dependence on Neurology and General Medicine."

Discussion: Dr. C. Macfie Campbell, Professor of Psychiatry, Harvard Medical School.

Chairman: Dr. Abraham Myerson, Professor of Neurology, Tufts College Medical School.

Foster Kennedy, M.D., Royal University of Ireland, 1906. Professor of Neurology, Cornell Medical School; Head of Neurological Department, Bellevue Hospital; Associate Editor for Diseases of the Nervous System, Cecil's Textbook of Medicine.

HARVARD MEDICAL SOCIETY

The next meeting of the Harvard Medical Society will be held in the Peter Bent Brigham Hospital Amphitheatre (Van Dyke Street entrance) Tuesday evening, November 13, at 8:15 P.M.

PROGRAM

Presentation of Cases.

Gastro-Intestinal Allergy and Its Diagnosis. By Dr. George Piness, Los Angeles, California.

New Concepts in Allergy with Especial Reference o Eczema. By Dr. Francis M. Rackemann, Boston, lassachusetts.

Dr. I. Chandler Walker will preside.

MARSHALL N. FULTON, M.D., *Secretary.*

SOCIETY MEETINGS, CONGRESSES AND CONFERENCES

November 1—Massachusetts Psychiatric Society. Annual meeting and dinner at the Hotel Statler, Boston, at 6:30 P.M. After the business meeting and election of officers, members will be addressed by Mr. Arthur Fiedler of the Boston Symphony Orchestra.

OSCAR J. RAEDER, M.D., Secretary.

November 1—Harvard Medical School. George W. Gay Lecture on "Medical Ethics." See page 843.

November 1—Faulkner Hospital Clinical Meeting will be held at 5 P.M. There will be a talk by Dr. Robert C. Cochrane on "Lessons Learned from More than One Hundred Thyroidectomies at the Hospital."

November 5-9—Inter-State Postgraduate Medical Association of North America. See page 649, issue of October 4, and page 726, issue of October 18.

MASSACHUSETTS DIETETIC ASSOCIATION

November 7—Wednesday, 8 P.M. Forsyth Dental Infirmary for Children, 140 Fenway, Boston, "The Arrest and Control of Dental Caries," Dr. C. L. Drain, College of Dentistry, State University of Iowa.

November 20—Tuesday, 2 P.M. Field Trip: Visit Kitchens of the Hotel Statler.

December 11—Tuesday, 8 P.M. "Food Allergy," Dr. Frank N. Allan, Department of Medicine, Lahey Clinic.

January 8—Tuesday, 8 P.M. "Careers and Natural Abilities," Professor Johnson O'Connor, Human Engineering Laboratory, Stevens Institute of Technology, Hoboken, N. J.

February 12—Tuesday, 8 P.M. "Diabetic Children," Dr. Priscilla White, Joslin Diabetic Unit.

March 12—Tuesday, 8 P.M. "The Effect of Diet on Anemia," Dr. Lewis Diamond, Instructor in Medicine, Harvard University Medical School, Associate Physician, Children's Hospital.

March 19—Tuesday, 2 P.M. Field Trip: Visit Storehouse, First National Stores.

April 9—Tuesday, 8 P.M. "Small Hospital Problems," Miss Margaret Copeland, Superintendent, Free Hospital for Women.

November 8—Cutter Lecture on Preventive Medicine. See page 844.

November 8—Clinic at the Peter Bent Brigham Hospital. See page 843

November 9—William Harvey Society. See page 845.

November 9—Phi Delta Epsilon Fraternity of Boston University School of Medicine. See page 845.

November 13—Harvard Medical Society. See page 845.

November 15 and 22—Harvard Medical School. Lectures on "The Care of the Patient." See page 843.

December 3-7—The Radiological Society of North America. See notice on page 562, issue of September 20.

December 6-8—Annual Conference of the National Society for the Prevention of Blindness. See page 736, issue of October 18.

April 29 - May 3, 1935—The American College of Physicians will meet at Philadelphia. For information address Mr. E. R. Loveland, Executive Secretary, 133-135 South 36th Street, Philadelphia, Pa.

June, 1935—Medical Library Association will meet in Rochester, N. Y. For details address the Secretary: Miss Frances N. A. Whitman, Librarian, Harvard University Schools of Medicine and Public Health, Boston, Mass.

DISTRICT MEDICAL SOCIETIES

ESSEX NORTH DISTRICT MEDICAL SOCIETY

The Semi-Annual Meeting will be held in January and the Annual Meeting in May, time, place and subject to be announced.

E. S. BAGNALL, M.D., Secretary.

FRANKLIN DISTRICT MEDICAL SOCIETY

Meetings will be held on the second Tuesday of November, January, March, and May at the Weldon Hotel, Greenfield, Mass.

CHARLES MOLINE, M.D., Secretary.

Sunderland.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY

November 14—Reading.

January 9, 1935—Melrose.

March 13, 1935—Wakefield.

May 8, 1935—Winchester.

K. L. MACLACHLAN, M.D., Secretary.

1 Bellevue Street, Melrose.

SUFFOLK DISTRICT MEDICAL SOCIETY

November 1—The Censors of the Suffolk District Medical Society will meet for the examination of candidates at the Medical Library, 8 Fenway, Thursday, November 1, 1934, at 4 o'clock.

November 28—Meeting at the Boston Medical Library. Speakers: Dr. Frederick T. Lord, Dr. Edward D. Churchill, Dr. Roderick Heffron. Subject: Symposium on Pneumonia.

January 23, 1935—General Meeting in association with the Boston Medical Library. Speaker and subject to be announced later.

March 27, 1935—Clinical Meeting at the Boston Lying-In Hospital.

April 24, 1935—Clinical Meeting at the Children's Hospital.

The medical profession is cordially invited to attend all of these meetings.

ROBERT L. DeNORMANDIE, M.D., President.
GEORGE P. REYNOLDS, M.D., Secretary.
HENRY T. HUTCHINS, M.D., Boston Medical Library.

WORCESTER DISTRICT MEDICAL SOCIETY

November 14—The November meeting will be held in the auditorium at the Grafton State Hospital. A buffet supper will be served the members of the Society at 6:30 P.M., complimentary by the State Hospital. The business and scientific program will open at 7:30 P.M. The scientific paper will be presented by Dr. Walter Bauer of the Massachusetts General Hospital, Boston, and his subject will be "The Differential Diagnosis of Rheumatoid Arthritis." The second half of the evening's program will be less scientific than the first half and will consist of a non-scientific talking moving picture, presented by the Grafton State Hospital.

December 12—Wednesday evening. St. Vincent Hospital, Worcester, Mass. 6:30 P.M.: Dinner. 7:30 P.M.: Scientific program and business session. Announcement of subjects and speakers to be presented at a later date. Dinner complimentary by the Hospital.

January 9, 1935—Wednesday evening. Worcester City Hospital, Worcester, Mass. 6:30 P.M.: Buffet supper. 7:30 P.M.: Scientific program and business session. Announcement of subjects and speakers to be presented at a later date. Buffet supper complimentary by the Hospital.

February 13, 1935—Wednesday evening. Worcester State Hospital, Worcester, Mass. 6:30 P.M.: Dinner. 7:30 P.M.: Scientific program and business session. Announcement of subjects and speakers to be presented at a later date. Dinner complimentary by the Hospital.

March 13, 1935—Wednesday evening. The Memorial Hospital, Worcester, Mass. 6:30 P.M.: Buffet supper. 7:30 P.M.: Scientific program and business session. Announcement of subjects and speakers to be presented at a later date. Buffet supper complimentary by the Hospital.

April 10, 1935—Wednesday evening. Worcester Hahnemann Hospital, Worcester, Mass. 6:30 P.M.: Dinner. 7:30 P.M.: Scientific program and business session. Announcement of subjects and speakers to be presented at a later date. Dinner complimentary by the Hospital.

May 8, 1935—Wednesday afternoon and evening. Annual Meeting of the Worcester District Medical Society. The time and place of this meeting will be announced later.

ERWIN C. MILLER, M.D., Secretary.

27 Elm Street, Worcester.

BOOK REVIEWS

Collens System of Diet Writing. Including: Diet Calculator, Obesity Chart, and 100 Menu Prescription Forms. By William S. Collens. New York: Form Publishing Company. $5.00.

This device (for that is what this publication really is) is aimed to simplify dietetic prescriptions. By means of this calculator one can read off directly the diet in terms of carbohydrate, fat and protein simultaneously with the foods to be prescribed. Unfortunately, to utilize this calculator correctly and wisely presupposes a sound knowledge of dietetics in its relationship particularly to diabetes, nephritis and nephrosis. Constant recourse to such a device

is practicing medicine blindly. As has been wisely remarked "Oversimplification is a great deceiver of reason."

International Clinics. Volume II. Forty-Fourth Series, 1934. 318 pp. By leading members of the medical profession throughout the world. Edited by Louis Hamman and Collaborators. Philadelphia: J. B. Lippincott Company.

The variety of interests which are catered to in this volume may be judged by the wide choice of subjects. Eitel and Loeser present an article on the interrelationship between the pituitary gland, the thyroid gland and the carbohydrate metabolism of the liver which summarizes their quite original work in this field. Some surgical aspects in the treatment of pulmonary tuberculosis are very systematically covered by the Matsons. Eastman offers a review appraising the present status of the "Toxemias of Later Pregnancy." A worthy contribution in a much neglected field is that of McBride on "Estimating the Extent of Disability" with particular reference to industrial trauma. The remaining articles are all of interest and give the volume real merit.

International Clinics. Volume III. Forty-Fourth Series, 1934. Edited by Louis Hamman. 327 pp. Philadelphia, Montreal, and London: J. B. Lippincott Company.

This volume continues to maintain the high standard for which these clinics are becoming so well known. The articles of merit are too numerous to mention individually and are well worth the perusal of those who are seeking to keep abreast of recent advances in both medicine and surgery.

Bronchoscopy, Esophagoscopy, and Gastroscopy. A Manual of Peroral Endoscopy and Laryngeal Surgery. By Chevalier Jackson and Chevalier L. Jackson. Third Edition, Reset with 225 illustrations and 15 color plates. 485 pp. Philadelphia and London: W. B. Saunders Company. $9.00.

Appearing now in the third edition, this manual of peroral endoscopy has expanded from 300 to 450 pages and has been entirely reset with 225 illustrations and 15 color plates, the latter in colored oils from the senior author's own brush. In spite of the increased size, the book maintains its claim as an authoritative working manual rather than a comprehensive textbook, hence the policy of omitting historical data, contrary opinions and explanatory elaborations has been maintained. The work is now one of double authorship of father and son. The arrangement of chapters is almost identical with that of the first edition though in each instance there has been an amplification of the subheadings consistent with the rapid advances in this specialty. In particular, the subject of gastroscopy has been greatly expanded, so much so as to merit inclusion in the main title.

The illustrations are far more extensive and illuminating than in previous editions. While many of the original plates have been retained, the greater proportion are new, especially those which illustrate operative technique and only rarely does there appear a first edition scene to show by contrast the progress of the last ten years.

There is a much more complete and detailed description of appropriate instruments and the indications for their use. There has been added a much freer use of reproductions of x-ray films than in former editions. Insufflation anesthesia is given greater consideration together with the use of fluoroscopy as an adjunct in bronchoscopic removal of certain foreign bodies.

The subjects of esophageal diverticulum and esophageal stricture are more forcibly stressed and the whole subject of the place of bronchoscopy in diagnosis and treatment of lung suppuration is more detailed.

The bibliography has been expanded to include 136 references.

The book remains, as heretofore, an epitome of the endoscopic experience and teaching of one of the greatest authorities in this special surgical field.

Clinical Toxicology. Modern Methods in the Diagnosis and Treatment of Poisoning. By Erich Leschke. 346 pp. Baltimore: William Wood and Company. $5.00.

Treatises on toxicology have usually been written from the standpoint of the analyst who identifies the poison involved or from that of the pathologist who describes the lesions found after death. The present work was written by a professor of internal medicine at the University of Berlin and, as the title indicates, deals with the clinical aspects of the subject; the importance of this phase is shown by the estimate of Zangger that perhaps eighty per cent of the cases of poisoning are at first incorrectly diagnosed.

The seriousness of the problem is shown by the fact that 10,179 deaths from poisons were reported in the United States in 1928; there were 3,636 such deaths reported in Germany in 1929 and 2,433 in England in 1930.

The first part of the book treats of poisoning, both acute and chronic, by lead, thallium, mercury, arsenic, radium and other inorganic substances.

There is more new material in the second part in which poisoning by organic compounds is discussed; there are chapters here on the toxicology of war gases and of many new drugs. It is stated, for example, that barbital ("veronal") is (with the exception of carbon monoxide) the most frequently used poison in Germany for suicide; of 190 such deaths 74 were due to barbital.

There are sections devoted to the toxicology of other comparatively new organic drugs ("Pyramidon," "Atophan," etc.) as well as of the older, well-known poisons (opium and its derivatives, the cyan-

ides, phenol, etc.). There are also chapters on poisonous foodstuffs, poisonous animals and industrial poisons.

There is a very useful appendix giving the true names of various drugs with their proprietary trade names; thus Allonal is stated to be a mixture of a barbiturate and amidopyrin. "Quadronox," which figured in a sensational death a few years ago, is stated to be simply barbital. There is a discussion of tricresyl phosphate poisoning which caused, it is stated, about fifteen thousand cases of so-called "Ginger Paralysis" in the United States; the poison had been substituted for some of the ginger in the essence of ginger.

This poison was also responsible for numerous cases of so-called "Apiol poisoning" in Europe at about the same time.

This brief review gives only an imperfect outline of the many interesting and important poisons discussed in this excellent book.

Medicine Man in China. By A. Gervais. 336 pp. New York: Frederick A. Stokes Company. $2.75.

Two young French physicians recently went to China to serve in a missionary hospital at Chengtu in the interior of the Great Empire. There they worked under great difficulties, through famine and cholera, much of the time opposed, in addition, by Chinese customs. They attempted teaching in a medical school. In the course of their work they encountered many amusing situations, which somewhat relieved the seriousness of their task. This is a bright and lively account of their experiences, written by one of them, a man with an excellent sense of humor. For an insight into Chinese character and an explanation of the difficulties encountered by the physicians attached to a missionary hospital, as well as for an amusing story, this book can be highly recommended. It has been successfully translated from the French.

The Medicolegal Necropsy. Edited by Thomas B. Magath, M.D., for the American Society of Clinical Pathologists. 167 pp. Baltimore: The Williams and Wilkins Company, 1934. $2.50.

This is a symposium which, except for the introduction and a consideration of medicolegal systems in the United States, is made up largely of a series of papers by experts associated with the medical examiner system in and about New York City. In the opening paper Dr. O. T. Schulz of Chicago, who has made a thorough study of the medicolegal systems of America, makes plain the superiority in functioning of the medical examiner system over the archaic coroner system. The medical examiner system was born in Massachusetts in 1877 through the joint efforts of the Massachusetts Medical Society and the Massachusetts Bar Association, because of scandals arising in the coroner system. A similar scandalous situation in New York City led to the adoption of the Massachusetts system with slight modification. In the meantime poorly patterned modifications of the Massachusetts practice were set up in the New England states excepting Vermont, and more recently Essex County, New Jersey, adopted the New York modification of the system under the direction of Dr. Harrison S. Martland. Following the paper of Schulz and an appeal by Dr. Charles Norris, Chief Medical Examiner of New York City, for recognition in America of the need for better medicolegal service, the book deals with the medicolegal necropsy as such. The technical procedure is outlined by Dr. A. V. St. George, the findings in drowning cases are summarized by Dr. E. L. Miloslavich of Hungary, and medicolegal toxicology is dealt with by Alexander O. Gettler, who is a master of the subject. The remaining ninety-four pages are given up to a discussion by Dr. Martland of the picture in deaths due to criminal violence, including shooting, stabbing, cutting and asphyxia. This portion of the work is very completely illustrated by a series of illuminating photographs from New York City cases and those arising in Essex County, New Jersey, together with some diagrams.

An appendix is made up of the procedures agreed upon concerning necropsies by the New York Academy of Medicine, The New York Pathological Society and the Metropolitan Funeral Directors Association. This text could be taken as a model for similar agreements in other centers.

This work by highly expert authorities should serve as an introduction to the study of legal medical practice, particularly in postmortem examinations. It can be recommended to the student or practitioner who is interested in legal medicine, and is a valuable supplement to the more comprehensive textbooks on forensic medicine.

Essentials of Histology. Descriptive and Practical. For the Use of Students. By Sir E. Sharpey-Schafer. Thirteenth Edition. Edited by H. M. Carleton. 618 pp. Philadelphia: Lea and Febiger, 1934. $5.00.

The thirteenth edition of Schafer's Essentials of Histology marks the beginning of a new phase in the life cycle of this remarkable textbook. All previous editions, beginning with the first, which appeared in 1885, bear the personal impress of the original author, Sir Sharpey-Schafer of the University of Aberdeen. But the revision of the new edition is ascribed to H. M. Carleton, Lecturer on Histology in the University of Oxford.

In this revision, no alteration in the plan of the book has been attempted. The only marked changes in the text occur in the chapters dealing with the development of blood and bone formation, both of which have been rewritten. A number of new illustrations, moreover, have been added.

The book is still essentially Schafer's Histology, with all of its excellent qualities, adaptable either as a text for beginners, or as an outline of study for more advanced students.